

**U.S. DEPARTMENT OF TRANSPORTATION,
FEDERAL AVIATION ADMINISTRATION, AND
U.S. DEPARTMENT OF INTERIOR, NATIONAL PARK SERVICE**

RECORD OF DECISION

Air Tour Management Plan for Great Smoky Mountains National Park

INTRODUCTION

This Record of Decision (ROD) provides the Federal Aviation Administration's (FAA's) and the National Park Service's (NPS's) (together, the agencies) final determination to implement the Air Tour Management Plan (ATMP) for Great Smoky Mountains National Park (Park), in accordance with the National Parks Air Tour Management Act (NPATMA), as amended, its implementing regulations (14 CFR Part 136), and all other applicable laws and policies. This ROD includes a summary of the applicable background, the objective of the action taken, a description of the action taken, a summary of consultation/compliance processes for the ATMP, an identification of substantive changes from draft ATMP to the final ATMP, and an explanation of the basis and justification for measures taken in the ATMP.

BACKGROUND

World renowned for its diversity of plant and animal life, the beauty of its ancient mountains, and its remnants of Southern Appalachian mountain culture, the Park is America's most visited national park with over 12 million visitors per year. The Park is in the Southern Appalachian Mountains and straddles the border between North Carolina and Tennessee. The Park comprises a total of 522,000 acres, of which 464,544 acres are recommended and proposed wilderness, representing approximately 89% of the Park. With more than 21,000 species identified within its boundaries, Great Smoky Mountains National Park is one of the most biologically diverse parks in the national park system. The Park provides habitat for numerous federally threatened and endangered species, including the Carolina northern flying squirrel, northern long-eared bat, and Indiana bat, as well as sensitive species such as the bald eagle and peregrine falcon. This extraordinary diversity led to the Park's designation as a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site and International Biosphere Reserve. The Park also preserves a significant number of archeological sites, historic structures, and other vestiges of human interaction with the land. The Appalachian National Scenic Trail (Appalachian Trail), a separate National Park System unit, runs through the Park. The Appalachian Trail is a cultural resource eligible for inclusion on the National Register of Historic Places. The Foothills Parkway, which includes the Gatlinburg Spur (the Spur), is part of the Park. The ATMP, Appendix A to this ROD, provides further background regarding the Park and its resources, as well as relevant Park management objectives.

The National Parks Air Tour Management Act

NPATMA requires that all commercial air tour operators conducting or intending to conduct a commercial air tour operation over a unit of the National Park System apply to the FAA for authority to undertake such activity. 49 U.S.C. § 40128(a)(2)(A). NPATMA, as

amended, further requires the FAA, in cooperation with the NPS, to establish an ATMP or voluntary agreement for each park that did not have such a plan or agreement in place at the time the applications were made, unless a park has been otherwise exempted from this requirement. *Id.* § 40128(b)(1)(A). The objective of an ATMP is to “develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural and cultural resources, visitor experiences, and tribal lands.” *Id.* § 40128(b)(1)(B). An ATMP “may prohibit” commercial air tour operations over a national park in whole or in part, or “may establish” conditions for the conduct of commercial air tour operations over a park. *Id.* § 40128(b)(3)(A)-(B). The need for implementation of any measures taken in an ATMP must be justified and documented in the ATMP and within a record of decision. *Id.* § 40128(b)(3)(F).

As a threshold matter, the agencies needed to define what constitutes a commercial air tour so that they could implement NPATMA’s requirements. As relevant here, FAA regulations define a commercial air tour as:

[A]ny flight, conducted for compensation or hire in a powered aircraft where a purpose of the flight is sightseeing over a national park, within ½ mile outside the boundary of any national park, or over tribal lands during which the aircraft flies:

- (i) Below 5,000 feet above ground level (except for the purpose of takeoff or landing, or as necessary for the safe operation of an aircraft as determined under the rules and regulations of the Federal Aviation Administration requiring the pilot-in-command to take action to ensure the safe operation of the aircraft); [or]
- (ii) Less than 1 mile laterally from any geographic feature within the park (unless more than ½ mile outside the boundary) ...

14 CFR § 136.33(d).

Because Congress understood that developing ATMPs that meet NPATMA’s requirements could take some time, NPATMA provided that prior to the establishment of an ATMP, the FAA “shall grant interim operating authority” to existing air tour operators that apply for prospective operating authority. 49 U.S.C. § 40128(c)(1); H.R. Rep. No. 106-167, at 96. The interim operating authority (IOA) issued was required to be the greater of the number of commercial air tour flights over the park during the 12-month period prior to the enactment of NPATMA or the average number of commercial air tour flights within the 36-month period prior to the enactment of NPATMA. 49 U.S.C. § 40128(c)(2). Under NPATMA, IOA terminates 180 days after an ATMP is established. *Id.* § 40128(c)(2)(E).

NPATMA was substantively amended in 2012. In addition to authorizing the agencies to enter into voluntary agreements with air tour operators in lieu of developing ATMPs, 49 U.S.C. § 40128(b)(7)(A), the 2012 amendments added reporting requirements for operators conducting commercial air tour operations over national parks. *Id.* § 40128(d). In addition, the amendments exempted parks with 50 or fewer commercial air tours from the requirement to prepare an ATMP or voluntary agreement, unless this exemption was withdrawn by the NPS. *Id.* § 40128(a)(5).

The Compliance Plan

In February 2019, a petition for a writ of mandamus was filed in the U.S. Court of Appeals for the District of Columbia in which the petitioners requested an order directing the agencies to establish an ATMP or voluntary agreements under NPATMA for seven specified National Park System units, including Great Smoky Mountains National Park, within two years of such order. *In Re: Public Employees for Environmental Responsibility*, 957 F.3d 267, 271 (D.C. Cir. 2020). On May 1, 2020, the Court granted the petition, holding that the agencies had a mandatory duty to establish ATMPs or voluntary agreements for eligible parks under NPATMA and that mandamus relief was warranted based on delay in performance of this duty and consideration of the relevant factors. *Id.* at 273; Per Curiam Order, May 1, 2020 (Mandamus Order). The Mandamus Order directed the agencies to submit, by August 31, 2020, a proposed plan for bringing all 23 eligible parks within the National Park System into compliance with NPATMA, by completing an ATMP or voluntary agreement for those parks, within two years—or to offer “specific, concrete reasons” why it will take longer than two years. *Id.* The Court retained jurisdiction to approve the agencies’ plan and monitor their progress and directed the agencies to submit quarterly progress updates.

Consistent with the Court’s order, agencies submitted a proposed plan and schedule (Compliance Plan). In general, the Compliance Plan contemplated initiating and moving forward with a process to implement ATMPs for all eligible parks concurrently as part of a coordinated, omnibus effort. Because Great Smoky Mountains National Park was one of the 23 parks identified as requiring an ATMP or voluntary agreement under NPATMA, it was included in the Compliance Plan which was subsequently approved by the D.C. Circuit.

The Planning Process and Public Engagement

As no ATMP had previously been implemented for any park at the time the agencies submitted their Compliance Plan to the Court, as an initial step in this process, the agencies worked collaboratively to determine the contents of and process for completing an ATMP that would be consistent with NPATMA. Together, they developed a template which could then be modified and tailored to meet the specific needs and address the unique circumstances of each park included in the planning process. Further, because air tours have been occurring over parks for decades, the agencies had institutional experience and data to draw upon in developing the ATMP template and in determining how to regulate commercial air tours over the Park.

In the current planning process, the agencies worked to identify the existing operations of commercial air tours over the Park or outside the Park but within ½ mile of its boundary, i.e., the average number of commercial air tours conducted per year and the general operating parameters of those tours. Currently, two companies hold IOA for a combined total of 1,920 commercial air tours over the Park and over Cherokee tribal lands annually. Those companies are: Great Smoky Mountain Helicopter Inc. (Mountain Helicopter)¹ and Whirl’d Helicopters, Inc. (Whirl’d Helicopters).² IOA includes only an annual cap on the number of commercial air tours that may

¹ Mountain Helicopter also operates under the business names Smoky Mountain Helicopters, M Helicopters of TN, Delta Helicopters, and Cherokee Helicopters.

² Whirl’d Helicopters operates under the business name Scenic Helicopters.

be conducted by an operator but does not represent the actual number of air tours conducted and does not designate the route(s), time-of-day, altitude(s), or other conditions for such tours.

In 2019, while the litigation described above was pending but before the Court's decision had been issued, the agencies took steps to understand the existing condition of commercial air tours over the Park. An NPS led aircraft tracking project was initiated at the Park in 2019 that passively collected data from aircraft using the Automatic Dependent Surveillance-Broadcast (ADS-B) Out, which is a system that periodically transmits location data information in real-time. Analysis of the data indicated that not all air tour activity was being captured by ADS-B. However, the data that was captured provided the planning team with detailed information regarding air tour travel patterns (e.g., exact routes, altitudes, and timing).

This effort built on previous studies measuring baseline acoustic conditions in the Park that had been conducted in 2005 and 2006.³ Under NPS policy, the acoustic environment of a park (or a park's soundscape) is considered both a natural and cultural resource, as well as a resource that influences wildlife habitat and visitor experience. The 2005 and 2006 studies measured the Park's existing acoustic condition and modeled natural ambient noise conditions. Both the existing acoustic condition and natural ambient conditions were considered in an acoustic impacts analysis. Acoustic environment measurements were also taken in 2016.⁴

Because air tour routes needed to be further identified to understand where, at what altitude, and what types of aircraft were conducting air tours over the Park, the agencies reached out to Whirl'd Helicopters in 2019 to identify its existing routes which were then modeled by the agencies. This modeling information gave the agencies their first understanding of the intensity, duration, and spatial extent of impacts of air tours. The combination of the acoustic reports, aircraft tracking data, and modeling helped the planning team develop many of the conditions in the ATMP, including modifying the designated routes over the Park.

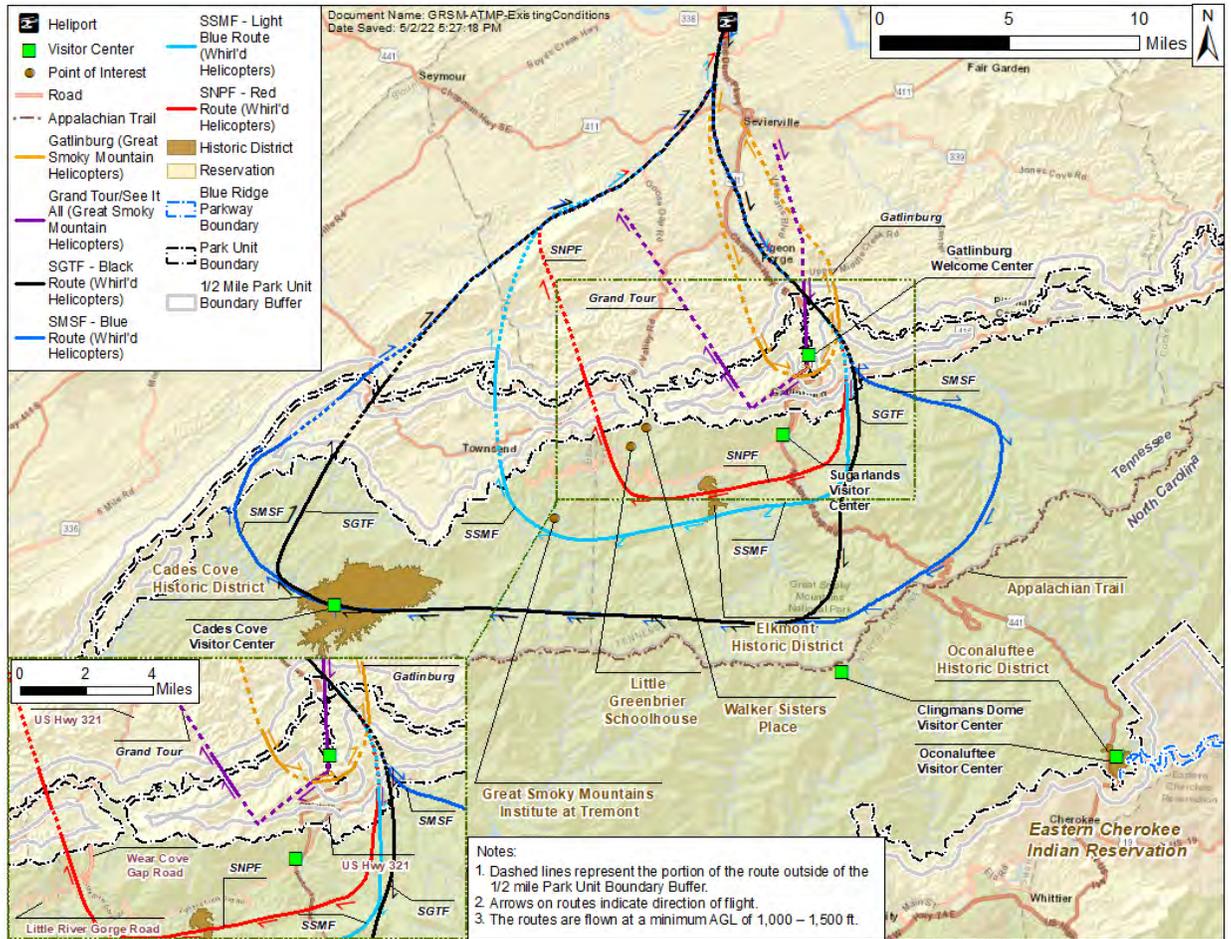
Mountain Helicopter was not asked to provide route information in 2019 because it had not reported any air tours from 2016-2018. Thus, Mountain Helicopter's operations and routes were not examined in the 2019 study. However, because Mountain Helicopter subsequently reported a 2019 commercial air tour, the agencies requested air tour route information from the operator in September 2020. Mountain Helicopter's initial reports included only one route (the Gatlinburg or Orange Route) but subsequent outreach efforts by the agencies revealed an additional route flown by the operator over the Park or within ½ mile of its boundary (the Grand Tour See it All or Purple Route). These two routes cross over the Foothills Parkway and a developed section of the Spur associated with the Foothills Parkway, both of which are part of the Park. Mountain Helicopter had not previously reported air tours on official reporting forms because it did not previously understand that these two routes were over a portion of the Park or

³ Lee, C., MacDonald, J., Scarpone, C., & Rapoza, A., Great Smoky Mountains National Park Baseline Ambient Sound Levels 2005 and 2006, DOT-VNTSC-FAA-16-21, DOT/FAA/AEE/2016-10 (2016).

⁴ Carpenter, G. & Becco, J. A., Great Smoky Mountain National Park: Acoustic Monitoring Report 2016, Natural Resource Report NPS/GRSM/NRR-2021/2267, National Park Service (2021) available at: <https://doi.org/10.36967/nrr-2286646> .

within ½ mile of the Park’s boundary, and thus that they were covered by NPATMA’s reporting requirements.

Figure 1 below depicts the current routes as reported by the operators.



In this planning process, the agencies decided to use a three-year average of operator-reported air tours to identify the existing condition, rather than reports from a single year, because using an average would account for variations across multiple years. In order to identify the three-year average, the agencies decided to use reported air tours from 2017, 2018 and 2019. These years were selected because they reflected relatively current air tour conditions, represented reliable operator reporting of air tours, accounted for variations across multiple years, and excluded 2020 which was generally atypical due to the COVID-19 pandemic. The agencies also decided against using 2021 data due to continued abnormalities associated with the COVID-19 pandemic and the unavailability of reporting data for 2021 during most of the planning effort.

Whirl’d Helicopters holds IOA for 1,800 flights per year over the Park and outside the Park but within ½ mile of its boundary, including Cherokee tribal lands within that area. Since the agencies began collecting reporting data in 2013, Whirl’d Helicopters has reported 286 air tours in 2013, 610 air tours in 2014, 841 air tours in 2015, 810 air tours in 2016, 838 air tours in

2017, 771 air tours in 2018, 982 air tours in 2019, and 1,404 air tours in 2020.⁵ Based on the three-year average of reporting data from 2017-2019, Whirl'd Helicopters conducts an average of 864 commercial air tours each year. Whirl'd Helicopters conducts commercial air tours on four different routes over the Park or within ½ mile of its boundary: the National Park Flight (SNPF) – Red Route; the Smoky Mountain Spectacular (SMSF) – Blue Route; Scenic Special Flight (SSMF) – Light Blue Route; and Grand Tour (SGTF) – Black Route. All air tours are flown using a BHT-206 or R-44. rotorcraft. Of these routes, the Red Route is the most frequently flown route by Whirl'd Helicopters, and 90% of all of its commercial air tours over the Park between 2017 and 2019 used this route.

Mountain Helicopter holds IOA for 120 commercial air tours per year over the Park and outside the Park but within ½ mile of its boundary, including Cherokee tribal lands within that area. As noted above, Mountain Helicopter had previously not reported commercial air tours over the Park from 2017-2019 because its tours were conducted only over the Foothills Parkway area of the Park and the operator did not understand that those tours were required to be reported under NPATMA. The operator advised the agencies that it estimates that it conducted approximately 82 commercial air tours per year over the Foothills Parkway area of the Park or within ½ mile of its boundary. Of these, an average of 70 air tours per year were conducted on the Orange Route and 12 air tours per year on the Purple Route.⁶ All air tours are flown on a BHT-206-B rotorcraft.

Collectively, based on operator reported data, the existing condition is 946 commercial air tours per year on the routes depicted in Figure 1 above. This number includes a three-year average of 864 commercial air tours reported by Whirl'd Helicopters in 2017, 2018 and 2019 and the 82 commercial air tours estimated to be conducted by Mountain Helicopter on the Purple and Orange routes over the Foothills Parkway area. Both operators currently fly between 1,000 feet (ft.) and 1,500 ft. above ground level (AGL) on all routes while over the Park or outside the Park but within ½ mile of its boundary.⁷ Commercial air tours may occur at any time and on any day of the week.

In order to identify a proposed action for the draft ATMP, the NPS assembled an interdisciplinary team of subject matter experts from the NPS's Natural Sounds and Night Skies Division, the NPS Environmental Quality Division, the NPS Southeast Regional Office, and the Park. The interdisciplinary planning team, which included biologists, the Park's chief of resource management and science, the Park's backcountry management specialist, the Park's cultural resource program manager, a physical scientist/air quality specialist, park planning and National Environmental Policy Act (NEPA) specialists, management assistant/analyst, and natural resource specialists, conducted a series of biweekly meetings to identify a proposed action. In these meetings the subject matter experts considered the routes and operations, the Park's noise

⁵ Based on unpublished reporting data.

⁶ Mountain Helicopter represented it conducts two distinct air tours that use the Purple route, but the differences in these tour routes are well away from the Park; thus, these two air tours are considered a single route over the park for the purposes of this ATMP.

⁷ Altitude expressed in AGL units is a measurement of the distance between the ground surface and the aircraft.

sensitive resources, and the Park's existing and natural acoustic environment, visitor experience, as well as potential mitigation or protective measures that could be included in an ATMP. In developing a proposed action, the interdisciplinary planning team modified the operator-provided routes so that they would not fly over sensitive areas, including historic districts, or interfere with Park interpretive programs. Other mitigations (changes from the existing condition) were included, including imposing a minimum altitude for all commercial air tours of 2,600 ft. AGL.

In addition to the Park-specific studies discussed above, numerous other reports and analysis were also considered in the ATMP planning process to understand the Park's acoustic environment and the impacts from air tours. Impacts of aircraft sound range from masking quieter sounds of nature such as bird vocalizations or interrupting conversational speech between visitors. To capture how noise may affect quieter natural sounds or conversations, the noise analysis below examined the time above 35 dBA for quieter natural sounds and time above 52 for conversational speech disturbance.

In 2021, the proposed action, including proposed modifications to the operators' routes and altitudes and other relevant information, was modeled using FAA's Aviation Environmental Design Tool, a software system that models aircraft performance in space and time to estimate fuel consumption, emissions, noise, and air quality. This information was then considered, in addition to acoustic monitoring information, and analyzed by NPS's interdisciplinary planning team.

The proposed action identified by the NPS and justifications for restrictions on commercial air tours were reviewed by the FAA, including the FAA's local Flight Standards District Office (FSDO), for any aviation safety concerns. During this time, the agencies also conducted preliminary environmental analysis to identify the appropriate NEPA pathway for a draft ATMP implementing the proposed action; initiated consultation pursuant to Section 106 of the National Historic Preservation Act, including tribal consultation; and began informal consultation with the U.S. Fish and Wildlife Service consistent with Section 7 of the Endangered Species Act.

NPATMA requires that the agencies publish notification of the availability of a draft ATMP in the Federal Register for public comment and hold at least one public meeting for each draft ATMP. The FAA published a notice of availability of the draft ATMP for Great Smoky Mountains National Park in the Federal Register on September 3, 2021. Public Meeting/Notice of Availability for Proposed Air Tour Management Plans at Bandelier National Monument; Great Smoky Mountains National Park; Arches National Park; Glacier National Park; Canyonlands National Park; Natural Bridges National Monument; and Bryce Canyon National Park, 86 Fed. Reg. 49,593 (Sept. 3, 2021). The agencies held the public meeting for the ATMP for Great Smoky Mountains National Park on September 16, 2021 and accepted public comments on this ATMP between September 3 and October 13, 2021.⁸ The agencies received

⁸ The public comment period was initially scheduled to end on Oct 3, 2021. However, due to an inaccurate statement on the public facing PEPC site, which was corrected, the comment period was extended for 10 days. The draft ATMP itself did not contain any inaccuracies.

484 comment letters on the draft ATMP, 75 of which were form letters and 409 of which were unique individual letters. The agencies' review and analysis of the public comments, including comments regarding draft ATMPs for other parks that were generally applicable to the Great Smoky Mountains ATMP, were used to inform this ROD, the final ATMP, and the attached environmental compliance documentation.

OBJECTIVE

The objective of the ATMP is to implement “acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural and cultural resources, visitor experiences, and tribal lands.” 49 U.S.C. § 40128(b)(1)(B).

The ATMP is necessary for the following reasons:

- An ATMP or voluntary agreement for Great Smoky Mountains National Park is required by NPATMA. The agencies have chosen to satisfy this requirement by implementing an ATMP.
- Currently, commercial air tours are operating under IOA which does not include mitigation measures that the NPS believes are necessary to protect Park resources and values, consistent with the NPS's obligations under the National Park Service Organic Act and the 2006 NPS Management Policies, and to achieve Park management objectives.

DESCRIPTION OF ACTION

The agencies will implement the ATMP for Great Smoky Mountains National Park, and the FAA will update the operations specifications (OpSpecs)⁹ for all air tour operators with IOA for the Park to incorporate the terms and conditions of the ATMP. The ATMP authorizes the existing condition of commercial air tour operations, based on the three-year average of such operations from 2017-2019, with measures designed to mitigate impacts to Park resources, visitor experience, and tribal lands as a result of commercial air tour operations. It also includes additional measures required by NPATMA. In general, the ATMP:

- Authorizes up to 946 total commercial air tours per year and includes operator-specific restrictions on the number of commercial air tours that may be conducted on an annual and daily basis.
- Sets a minimum altitude of 2,600 ft. AGL with limited exceptions for takeoff, landing, and emergency situations.
- Designates specific routes and sets an annual limit of tours that may occur on certain routes.
- Sets daily air tour allocations for Standard Days (5 tours between both operators) and Flex Days (7 tours between both operators), capping Flex Days for each operator at 40 per year.

⁹ OpSpecs are issued by the FAA to each operator and prescribe the authorizations, limitations, and procedures under which air tour operations must be conducted and require certain other procedures under which each class and size of aircraft is to be operated.

- Authorizes specific types of aircraft to be used on the tours and specifies that any new or replacement aircraft must not be noisier than the authorized aircraft.
- Provides that commercial air tours may not operate until two hours after sunrise and must end by two hours before sunset, unless they have been approved by the agencies for the quiet technology incentive, in which case they may operate tours beginning at sunrise or ending at sunset.
- Provides for the establishment of no-fly periods by the NPS for Park management or special events, including tribal events, with one-month advance notice to the operator.
- Provides for operator training and education.
- Requires annual meetings between the FAA Flight Standards District Office, Park staff, and the operators for the first five years after it is signed, after which time this annual meeting will be required if requested by either of the agencies.
- Requires operators to install and use flight monitoring technology on all authorized commercial air tours, and to include flight monitoring data in their semi-annual reports to the agencies, along with the number of commercial air tours conducted.
- Includes safety requirements relating to in-flight communications.
- Allows for minor modifications to the ATMP through adaptive management, so long as the impacts of such changes have already been analyzed in previous environmental compliance.
- Outlines a process for amending the ATMP.
- Provides information regarding the process for operators to apply for operating authority as a new entrant.
- Sets forth a general process for conducting competitive bidding for air tour allocations, where appropriate.
- Explains that compliance with terms of the ATMP will be mandatory, and IOA for the Park, as well as IOA for tribal lands abutting the Park, will be terminated, as of the effective date of the ATMP (the date the revised or updated OpSpecs are issued to the operators to implement the ATMP) which will be on or before 90 days from the date the ATMP is signed.

CONSULTATION AND COMPLIANCE

- **National Environmental Policy Act:** The NPS applied a documented categorical exclusion to the ATMP. The categorical exclusion that the NPS applied is set forth in the Department of the Interior, Departmental Manual at 516 DM 12.5 A(1), and is reproduced in the NPS NEPA Handbook at categorical exclusion 3.3.A.1. It applies to “[c]hanges or amendments to an approved action when such changes would cause no or only minimal environmental impacts.” Here, the “approved action” is the IOA issued by the FAA consistent with NPATMA, which was a non-discretionary authorization directed by Congress. The agencies used the NPS environmental screening form to document that there are no or minimal impacts from the ATMP. The NPS evaluated the extraordinary circumstances in 43 CFR § 46.215 and determined that no extraordinary circumstances apply and the ATMP will not result in significant impacts. The FAA performed its own extraordinary circumstances analysis and analysis under Section 4(f) of the Department of Transportation Act, codified at 49 U.S.C. § 303(c), and adopted the NPS’s categorical exclusion determination pursuant to 40 CFR § 1506.3(d). *See* Appendices B, C, and D.

- **Endangered Species Act:** The agencies completed informal consultation with the U.S. Fish and Wildlife Service regarding the ATMP. The agencies identified listed wildlife species and critical habitat potentially occurring in the area covered by the ATMP. The agencies determined that air tours *may affect but are not likely to adversely affect* the federally listed Indiana bat, northern long-eared bat, and Carolina northern flying squirrel, as well as the tri-colored bat and little brown bat, which are under review for federal listing. The agencies provided this determination to the U.S. Fish and Wildlife Service’s Tennessee Ecological Services Field Office via an April 4, 2022, informal Section 7 consultation letter.¹⁰ The U.S. Fish and Wildlife Service concurred with the agencies’ findings on April 27, 2022. *See* Informal Consultation Letter, Appendix E.
- **National Historic Preservation Act:** The agencies complied with Section 106 of the National Historic Preservation Act and completed the Section 106 consultation process with respect to this undertaking—implementing an ATMP for Great Smoky Mountains National Park. Via letter dated March 26, 2021 the FAA, acting as lead agency for the Section 106 process, initiated consultation under Section 106 with eight federally recognized tribes (Alabama Coushatta Tribe of Texas, Catawba Indian Nation, Cherokee Nation, Chickasaw Nation, Coushatta Tribe of Louisiana, Eastern Band of Cherokee Indians, Muscogee Creek Nation, and United Keetoowah Band of Cherokee Indians in Oklahoma). In the same letter, the agencies also invited these tribes to engage in government-to-government consultation under Executive Order 13175.¹¹ The FAA then initiated consultation via letters to the Tennessee State Historic Preservation Officer (SHPO) and the North Carolina SHPO on March 29, 2021. The FAA initiated consultation with all other identified Section 106 consulting parties on August 6, 2021.

Via the same and/or subsequent letters the FAA identified the area potentially affected by the undertaking, requested information regarding historic properties within the area of potential effects and proposed a finding of no adverse effect to historic properties as a result of the undertaking. The undertaking was defined consistent with the proposed action in the Categorical Exclusion Form, Appendix C, and is discussed above. Unless a tribe affirmatively opted out of consultation (as did the Chickasaw Nation) the identified tribes were copied on all correspondence with the SHPO regarding Section 106 consultation.

During the consultation process, the agencies conducted additional outreach to consulting parties for this undertaking and for other ATMPs included in the current planning process via webinar. The agencies conducted webinars on April 28, May 4, and May 6, 2021, for SHPOs, tribes, and other identified consulting parties to introduce key agency participants and the air tour management planning process, and to discuss next steps in the Section 106 process. The FAA also held a webinar for commercial air tour operators currently conducting air tours over any of the parks included in the planning process on

¹⁰ Though this letter was dated March 28, 2022, it was not fully signed by the agencies until April 4, 2022.

¹¹ None of the tribes indicated an interest to consult on a government-to-government level so tribal consultation for the undertaking occurred under the Section 106 framework.

November 19, 2021, to introduce them to the Section 106 consultation process. In addition, the FAA conducted further outreach efforts to the tribes identified as consulting parties for this ATMP, which is detailed in Appendix F.

Public involvement for this undertaking was integrated with the public involvement required under NPATMA, discussed *supra*. During the public comment period for the draft ATMP, the agencies did not receive any comments related to historic properties or the undertaking's potential effect on them.

Via letter dated May 3, 2022, the FAA proposed a finding of no adverse effect to the Tennessee and North Carolina SHPOs. *See* Appendix F. The North Carolina SHPO concurred with the finding of no adverse effect on May 5, 2022. In a letter dated May 19, 2022, the Tennessee SHPO objected to the finding. In June 2022, the FAA identified the Eastern Shawnee Tribe of Oklahoma and the Poarch Band of Creek Indians as new consulting parties and sent the finding of effects letter on June 24, 2022 and June 27, 2022, respectively. The Poarch Band of Creek Indians, Catawba Indian Nation, and Cherokee National Forest concurred with the finding of no adverse effects. No other consulting parties objected to the finding.

The FAA continued consultation with the Tennessee SHPO to resolve the SHPO's disagreement with the FAA's finding of no adverse effect but could not come to a resolution. Via letter dated September 6, 2022, the FAA requested that the Advisory Council on Historic Preservation (Council) review its finding. The FAA concurrently notified all consulting parties of its request and made this letter available to the public. On October 6, 2022, the Council issued an advisory opinion finding that the FAA appropriately applied the Criteria of Adverse Effect pursuant to 36 CFR § 800.5(a)(1), citing measures in the ATMP that "avoid adverse effects by reducing the effects of past conditions," and providing some recommendations. Via letter dated November 3, 2022, the FAA responded to the Council's advisory opinion and explained how the agencies have taken the Council's recommendations into account, including a change made to the final ATMP. *See* Appendix F.

- **Aviation Safety:** The draft ATMP, in particular the routes and altitudes included in the draft ATMP, was reviewed by the FAA's FSDO¹² with jurisdiction, to identify and address any safety concerns associated with the draft ATMP. No public comments on the draft ATMP raised any safety concerns and none of the routes or altitudes in the final ATMP were modified from those included in the draft ATMP that were reviewed by the FSDO.

¹² A FSDO is a local FAA field office that deals with various aviation issues including airmen and aircraft certifications, accident investigations, and enforcement and investigation issues.

CHANGES FROM THE DRAFT ATMP

In addition to minor, editorial changes made for clarity, the final ATMP includes the following substantive changes from the draft ATMP made in response to public comments on this or other draft ATMPs,¹³ or based on further agency review, as follows:

- **Section 3.7B Annual Meeting**

In response to the recommendation made by the Advisory Council on Historic Preservation, the agencies included language making clear that the annual meeting would be mandatory for at least the first five years after the ATMP was signed.

- **Section 3.7G Non-transferability of Allocations**

In response to comments questioning the transferability of air tour operations allocated under the ATMP, the agencies included language to make clear that allocations of annual air tour operations are not transferable between operators. But a successor purchaser may assume an operator's allocation of annual air tour operations by acquiring an entity holding allocations under this ATMP in its entirety. In order to avoid a break in service and to afford the agencies the necessary time to consult regarding modifications to OpSpecs, the ATMP requires that the prospective purchaser notify the agencies as early as possible of its intention to purchase the entity holding allocations and to certify that it will comply with the terms of the ATMP.

- **Section 3.8 Quiet Technology Incentives**

The agencies revised the language in Section 3.8 regarding the quiet technology incentive required by NPTMA in response to comments on this and other draft ATMPs requesting a definition of the term “quiet technology” or suggesting a definition for such term. The agencies have not included a definition of quiet technology in the ATMP. Instead, the ATMP provides for a consultation with operators regarding which of their aircraft qualify for the incentive at the time this ATMP is implemented. Subsequently, should operators wish to purchase new aircraft or make appropriate modifications to existing aircraft, they are encouraged to consult with the agencies prior to making such investment to determine whether the aircraft would qualify for the incentive. In response to comments regarding whether the incentive should or should not be applied retroactively to aircraft that may already qualify for the incentives, the agencies revised the language in the ATMP to make clear that the incentive may apply to operators that have already converted to quiet technology aircraft, if the agencies determine that they qualify for the incentive. To do otherwise, would unfairly penalize operators that were early adopters of quiet technology. The language in this section was also modified to make clear that not only will the effectiveness of the quiet technology incentive be monitored, but the effects of this incentive on Park resources and visitor experiences will be monitored by the NPS. If unanticipated effects are observed, the agencies may need to amend the ATMP to modify this or other sections. The quiet technology incentive itself— allowing quiet technology aircraft to conduct commercial air tours beginning at sunrise or ending at sunset on all days that flights are authorized—did not change from the draft ATMP to the final ATMP.

¹³ In August and October of 2021, the agencies released an additional five draft ATMPs covering eight other parks for public review and comment.

- **Section 5.0 Justification for Measures Taken**

This section was Section 4.0 in the draft ATMP. It was moved as a result of comments on one or more of the draft ATMPs expressing the opinion that the monitoring and compliance measures were not justified or explained. In order to include a justification for these requirements in the same section as the explanations for the other requirements included in the ATMP, the agencies thought it made more logical sense to move Section 5.0, *Compliance*, as well as Section 5.1, *Aircraft Monitoring Technology*, forward in the ATMP, and they are Sections 4.0 and 4.1, respectively, in the final ATMP. Additional changes to this section better align the justification for the annual operator training with purpose of the training and the justification for the annual meeting with the purpose of the meeting. Though these requirements may be combined, they are separate requirements with slightly different justifications.

- **Section 4.0 Compliance, Section 10.0 Conformance with Operations Specifications, and Section 11.0 Effective Date**

These sections were revised to make clear that the effective date of the ATMP is the date on which the operators' updated OpSpecs are issued by the appropriate FSDO. Because OpSpecs are used to inform the operators of the conditions under which they must operate and will be relied on by the FAA to enforce the terms and conditions of the ATMP, if necessary, it made sense for the effective date of the ATMP to be tied to the date that OpSpecs are modified and reissued to the operator and not to some other date. Section 4.0 of the ATMP (Section 5.0 in the draft ATMP) was revised to delete language that incorrectly assumed that there would be a difference between the effective date of the ATMP and modification of OpSpecs. Section 10.0 of the ATMP was revised to make clear that the FAA will issue new OpSpecs that incorporate the ATMP's operating parameters within 90 days of the date the ATMP is signed. Section 11.0 of the ATMP was revised to make clear that the effective date is the date new OpSpecs are issued, not some other date. In response to public comments, Section 4.0 Compliance was also revised to make clear that the public may report allegations of noncompliance and that the appropriate FSDO will investigate written reports of noncompliance consistent with FAA policy.

- **Section 4.1 Aircraft Monitoring Technology**

This section (which was Section 5.1 in the draft ATMP) was revised because the draft ATMP included the incorrect version of this section. The final ATMP includes the correct version and differs from the version included in the draft ATMP in certain respects. The version included in the ATMP makes clear that operators are required to use flight monitoring technology when conducting air tours authorized by the ATMP, that the flight monitoring data should be included as an attachment to their semi-annual reports, that it must be submitted in an agency-approved file format, and that the data submitted must include a unique flight identifier and aircraft model. The revised language also identifies additional information to be included in the reports and specifies that the ping rate for the flight monitoring technology should be set to a maximum of 15 seconds.

- **Additional changes**

In addition to the above changes, the draft ATMP was edited to clarify that the restrictions imposed by the ATMP apply not only when the operator is flying over lands or

waters within the Park boundary but also when the operator is flying over lands or waters outside of the Park boundary that are within ½ mile of its boundary. Further edits were made to explain that IOA had been issued for Cherokee tribal lands within ½ mile of the Park’s boundary, that none of the routes designated in the ATMP fly over the Eastern Cherokee Indian Reservation, that the restrictions in the ATMP are protective of tribal use of the Park, and that adaptive management measures could be taken in response to tribal input.

Appendix A to the ATMP was revised to expressly state that IOA (whether for the Park or Cherokee tribal lands) terminates on the effective date of the ATMP. Given that the operators will be required to fly consistent with the reissued OpSpecs, it would be inconsistent with the ATMP for IOA to remain after the ATMP is implemented. Though NPATMA provides that IOA “shall terminate 180 days” after the establishment of an ATMP, the agencies do not interpret this provision as precluding an earlier termination consistent with the terms and conditions of an ATMP. *See* 49 U.S.C. § 40128(c)(2)(E).

BASIS AND JUSTIFICATION FOR DECISION

- **Annual and daily commercial air tour limits**

The ATMP generally implements the existing condition, based on operator provided data, with respect to the total number of authorized air tours per year (946). The agencies decided to implement the existing condition, with the flight limitations described below, because the NPS determined impacts associated with the existing condition, together with reasonable mitigation measures included in the ATMP, would not result in significant adverse impacts on the Park’s natural and cultural resources, visitor experiences, or on tribal lands. As explained above, the agencies decided to use a three-year average of operator-reported air tours to identify the existing condition to account for variations across multiple years and selected the period from 2017 to 2019 because they reflect the most current and reliable air tour conditions, account for variations across multiple years, and exclude 2020 which was atypical due to the COVID-19 pandemic.¹⁴

The ATMP includes restrictions on the number of air tours that the operators may conduct on any given day and distinguishes between more restrictive “Standard Days” and less restrictive “Flex Days.” These restrictions provide a maximum number of air tours that may be conducted daily on Standard Days, but allow each operator up to 40 of Flex Days per year on which the maximum number of daily air tours allowed is slightly higher. On Standard Days, Whirl’d Helicopters may conduct up to 4 air tours and Mountain Helicopter may conduct one air tour. On Flex Days Whirl’d Helicopters may conduct up to 5 commercial air tours and Mountain Helicopter may conduct up to 2 commercial air tours. These limits are consistent with existing daily air tour operations reported over the Park for the time period from 2017-2019. The operators are not required to set specific Flex Days in advance and are not required to coordinate their use of Flex Days. The number of Standard Days on which operators may conduct air tours is not limited in the ATMP, except that operators may not exceed the number of air tours allocated them. Some commenters requested different daily limitations, including limiting flights

¹⁴ Whirl’d Helicopters reported a substantial increase in flights in 2020. This is atypical. Systemwide most commercial air tour operators reported fewer flights in 2020. Given the reporting history by this operator, increase in air tour activity over the Park in 2020 is likely due to factors related to the COVID-19 pandemic, and does not represent an independent trend.

on weekends, certain weekdays, or holidays. However, the agencies declined to include such limits, believing the Standard Day and Flex Day limitations to be sufficient to protect Park resources and values, while providing flexibility to operators.

The agencies did not use IOA as the number of air tour operations authorized under the ATMP because IOA was based on numbers reported by operators more than 20 years ago, does not represent the most current or reliable operational data, and is not verifiable by the agencies. As demonstrated by available reporting data, actual tours flown have been substantially below IOA since NPATMA's reporting requirement was implemented until the COVID-19 pandemic. Some commenters opposed the limits on the number of air tours included in the ATMP and advocated for an increase in the number of authorized air tours per year, including Whirl'd Helicopters which, based on preliminary information, reported 1,404 air tours in 2020, commented that it expected to conduct up to its IOA of 1,800 commercial air tours in 2021, and requested that its annual limit of authorized operations be increased to 1,800 air tours per year rather than the 864 authorized by the ATMP. The agencies declined to increase the number of air tours authorized per year above the existing condition (the three-year average from 2017-2019) for the following reasons. First, at the outset of this planning process the agencies used available reporting data, operator provided routes, and flight tracking information in order to model the existing condition and the impacts of the ATMP including proposed mitigations. The agencies could not, and should not be required to, continually shift their planning efforts, and expend further resources, to account for and model continually shifting data and also complete an ATMP for the Park consistent with the Compliance Plan. Second, the ATMP includes mitigation measures, including a minimum altitude (1,100 ft. to 1,600 ft. AGL higher than currently flown), annual and daily limits on air tours, and route modifications. These mitigation measures were necessary to mitigate the impacts of commercial air tours on Park resources, visitor experience, and tribal use and to meet NPS management objectives for the Park. Further increases in the annual limit of commercial air tours, particularly over the main body of the Park, would be more likely to have impacts to these resources that could prevent the NPS from achieving its Park management objectives. Third, the ATMP amendment process could allow for an increase in the number of commercial air tours authorized per year and would permit the agencies to evaluate the potential impacts of any additional air tours in the context of a concrete proposal from the operator that includes sufficient information for the agencies to assess the effects of such a proposal on Park resources.

Although some commenters suggested that the ATMP should include a permanent cap on the number of air tours, the agencies declined to do so because they found the terms of the ATMP, which provides that any increase in the number of air tours authorized per year would require a plan amendment, to be sufficiently protective of Park resources. A plan amendment would require additional public involvement and further environmental compliance, both of which also provide opportunities for further protection of Park resources and visitor experience. A plan amendment could also provide for a reduction in air tour authorizations.

Some commenters advocated for the elimination of air tours, consideration of a no air tours alternative, or the identification of sunset date for air tours, after which time no commercial air tours would be permitted. While NPATMA does state that an ATMP may ban air tours, it also contemplates that air tours may be an appropriate use over parks subject to restrictions that

prevent or mitigate significant impacts on park resources and visitor experience. The agencies believe that the operating parameters and other conditions in the ATMP provide appropriate restrictions and that there are no significant impacts to the Park's resources and visitor experience.

- **Designated routes and minimum altitude**

The ATMP includes designated routes that are based on the routes reported by the operators, with modifications to protect the Park's natural and cultural resources, and visitor experience. It also requires that all commercial air tours maintain a minimum altitude of 2,600 ft. AGL when flying over the Park. Though some commenters advocated for higher minimum altitudes up to 5,000 ft. AGL,¹⁵ the NPS interdisciplinary team found that a minimum altitude of 2,600 ft. AGL, combined with the other restrictions and mitigation measures included in the ATMP, was sufficient to protect Park resources.

As noted above, the NPS interdisciplinary planning team considered the routes reported by the operators and the modifications needed to protect Park resources and values. The designated routes included in the ATMP include modifications to existing routes that protect visitor experience and the Park's natural and cultural resources by aligning commercial air tour routes with existing transportation corridors, avoiding noise-sensitive wildlife habitat, and avoiding historical and cultural resources. Further, the ATMP expressly prohibits hovering and looping by aircraft when conducting air tours over the Park or within ½ mile of its boundary.

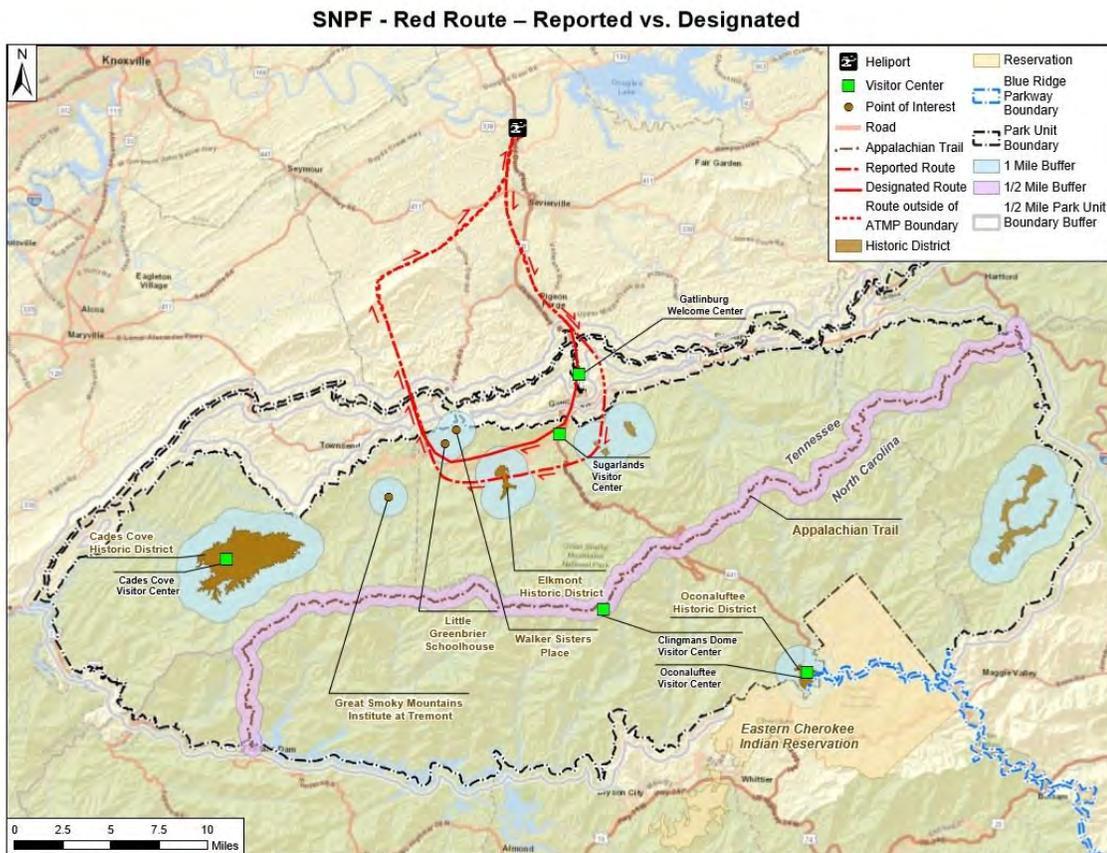
The routes assigned to the two operators align with the routes they currently fly. Mountain Helicopters is assigned the Orange and Purple Routes, both of which perpendicularly cross the Foothill Parkway, but never cross into the main body of the Park. No modifications were made to Mountain Helicopter routes, as no modifications were needed. Whirl'd Helicopters is assigned the Red Route, the Black Route, the Blue Route, and the Light Blue Route with the modifications described and depicted below. Further, the ATMP sets an annual limit on the number of air tours that may be conducted on the Blue Route (17 air tours per year) and the Black Route (26 air tours per year). These limits are consistent with the 3-year average from 2017-2019 reported by the operator. The annual limits on the number of tours that may be conducted on the Blue and Black Routes further protect the Park's acoustic environment and backcountry experiences because these routes spend more time over the Park and fly further into the backcountry than any of the other designated routes.

The Red Route as designated in the ATMP includes minor modifications to the existing route as reported by Whirl'd Helicopters. The reported route, which is flown for approximately 90% of the operator's reported tours, flies near Elkmont Historic District, Walker Sisters Place, and Little Greenbrier Schoolhouse, all of which are significant historical/cultural resources. Aircraft monitoring research has shown air tours on the Red Route actually follow the road corridors of Highway 321, Highway 441, Little River Road, and Wear Cove Gap Road more so

¹⁵ Because the term commercial air tour over a national park is defined by regulation as a flight below 5,000 ft. AGL, 14 CFR § 136.33(d)(i), raising the minimum altitude to more than 5,000 ft. AGL would be tantamount to a ban on commercial air tours over the Park and outside the Park but within ½ mile of its boundary.

than the Red Route provided by the operator and depicted below. Following these road corridors means that the Red Route is shorter in length and its path along these road corridors helps mask noise from air tours. This change also avoids the air tours flying over or near the Roaring Fork Historic District and Voorheis Estate. The designated route incorporates this path. The existing route then turns north to exit the Park often flying east of Wear Cove Gap. However designated route is modified to move the air tours west of Wear Cove Gap Road to avoid flying over Walker Sisters Place and Little Greenbrier School.

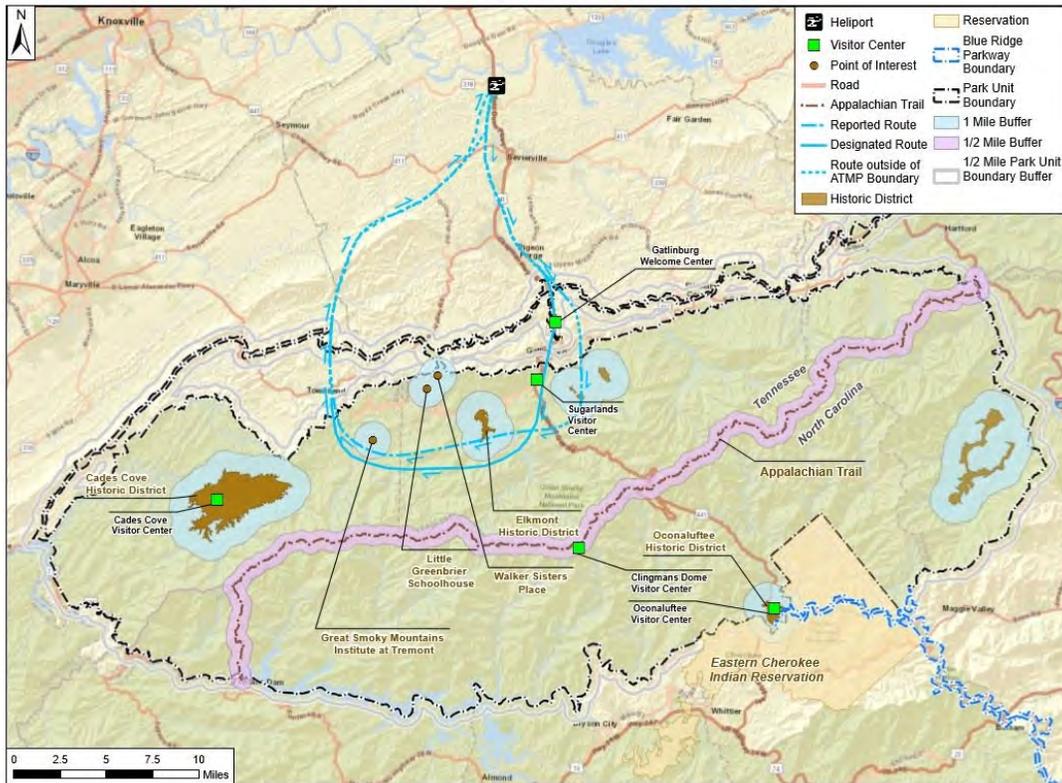
Figure 2 below depicts both the current Red Route as reported by the operator and the Red Route as designated in the ATMP.



The Light Blue Route as designated in the ATMP also includes minor modifications to the existing route as reported by Whirl'd Helicopters. Similar to the Red Route, the beginning of this route will fly over Highway 321 and Highway 441. Additionally, the modifications to this route were made to avoid overflying the Elkmont Historic District, a noise-sensitive cultural resources, and the Great Smoky Mountains Institute at Tremont, where the NPS conducts outdoor educational and interpretive programming. The modifications to this route move the flight path of air tours using this route to less noise sensitive areas of the Park.

Figure 3 below depicts both the current Light Blue Route as reported by the operator and the Light Blue Route as designated in the ATMP.

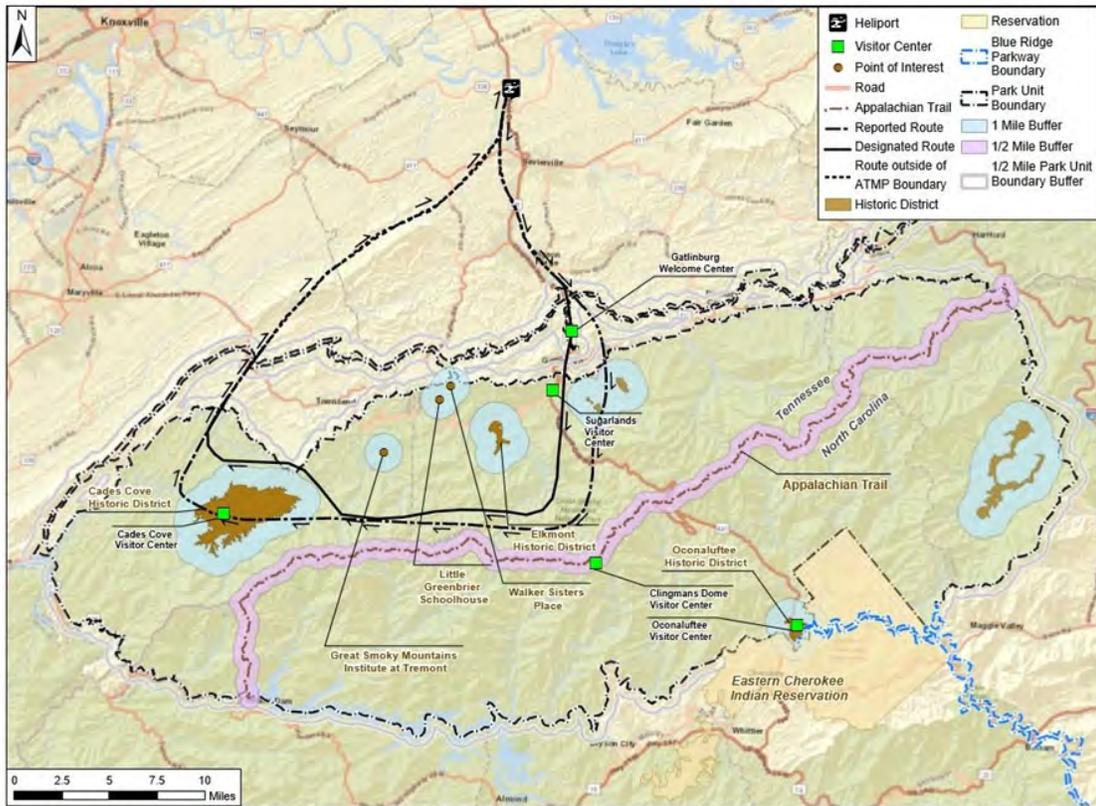
SSMF - Light Blue Route – Reported vs. Designated



Additionally, the Black Route as designated in the ATMP includes minor modifications to the existing route. Similar to the Red and Light Blue Routes, the Black Route will follow the road corridors of Highway 321 and Highway 441 to concentrate use over the transportation corridors and away from historic districts. As reported, the Black Route flies within ½ mile of the Appalachian Trail. Although the Appalachian Trail runs through the Park, it is a separate NPS management unit. No IOA has been issued for the Appalachian Trail, which is itself a nationally significant natural, scenic, recreational, and cultural resource. The Black Route as designated in the ATMP modifies the existing route to ensure that air tours remain at least ½ mile north of the Appalachian Trail. This change also ensures that air tours do not come within ½ mile of Clingman’s Dome, an important cultural resource and visitor use area. Additional modifications were made to avoid the noise sensitive Cades Cove Historic District. All flights are required to stay at least one mile north of the District. In sum, the Black Route as designated in the ATMP moves air tours to less noise sensitive areas of the Park compared to the existing Black Route.

Figure 4 below depicts both the current Black Route as reported by the operator and the Black Route as designated in the ATMP.

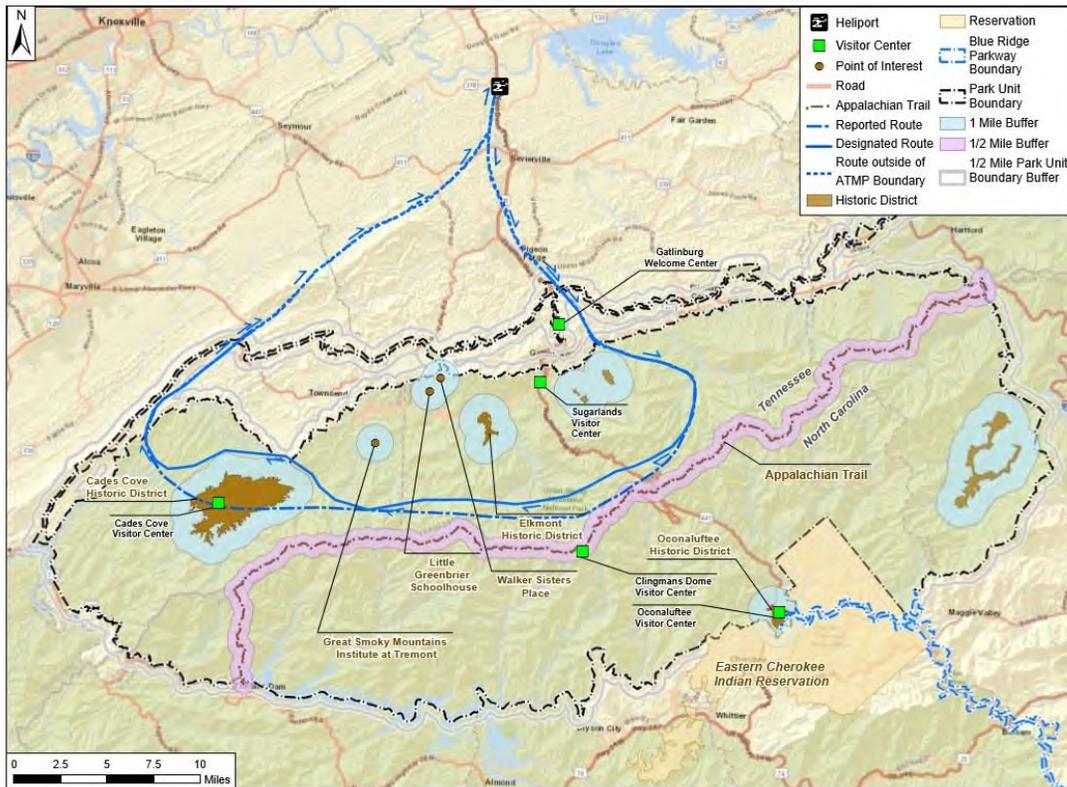
SGTF - Black Route – Reported vs. Designated



Similar to the Black Route, the operator reported route for the Blue Route was modified to stay at least ½ mile north of the Appalachian Trail and one mile north of the Cades Cove Historic District. As a result of these modifications, the Blue Route as designated in the ATMP flies over less noise sensitive areas of the Park than the route currently flown.

Figure 5 below depicts both the current Blue Route as reported by the operator and the Blue Route as designated in the ATMP.

SMSF - Blue Route – Reported vs. Designated



- **Hours of operation**

The ATMP authorizes air tours to operate beginning 2 hours after sunrise until 2 hours before sunset unless they are flown using aircraft that qualify for the quiet technology incentive, a mitigation measure that offers resource protection during these times of day which are important to wildlife and visitor experience. Though commenters requested changes further restricting the hours during which commercial air tours are permitted to operate, the agencies declined to change these operating parameters because the NPS found the hours of operation in the ATMP, together with the designated routes, altitude restrictions, daily caps on air tour operations, and caps on the longer routes over the Park, and other conditions in the ATMP to be sufficiently protective of Park’s the natural and cultural resources and visitor experience.

- **Annual meetings**

The ATMP requires operators to attend an annual meeting for the first five years after the ATMP is signed after which time, it requires operators to attend an annual meeting at the request of either agency. As noted above, this change was made in response to a recommendation from the Advisory Council on Historic Preservation. Commenters requested other changes to these provisions including making the meetings public and requiring that the operators distribute certain materials to passengers. The Council recommended that the results of the annual meetings be shared amongst the consulting parties with an invitation for their participation, as needed. The agencies declined to make additional changes to these provisions of the ATMP. It is important to allow Park staff the flexibility to tailor meetings to meet Park needs and incorporate new information as Park management needs change. It is not necessary, at this point, to prescribe

the format for information to be provided to the operators and would be burdensome on operators and Park staff to require operators to provide specific printed material to air tour patrons. The agencies also declined to make operator meetings public as it would not serve the communication and coordination purposes of these meetings. The NPS needs to be able to meet with the operators as it does with other commercial service providers that operate within Park boundaries. However, the NPS does regularly meet with both the Tennessee and North Carolina SHPOs and can discuss any concerns related to commercial air tours at those meetings. If information related to effects of air tours on historic properties arises at the annual ATMP meeting with the operators, such information would then be shared with consulting parties. In addition, other avenues remain available for stakeholders to provide the agencies with their input regarding commercial air tour operations. For example, the National Parks Overflights Advisory Group meets every year to discuss various aspects of air tour management throughout the National Park System and those meetings are open to the public.

- **Annual Training**

The ATMP also requires operators to attend a training course at least once per year when it is made available by Park staff. The training will include information that the operators can use to further their own understanding of the Park management priorities or objectives as well as enhance the interpretive narrative for air tour clients.

- **Monitoring and Compliance**

In order to successfully implement the ATMP, the agencies determined that it should include provisions to allow the agencies to adequately monitor and ensure compliance with its conditions. To this end, Section 4.1 of the ATMP requires that operators equip aircraft used for air tours with flight monitoring technology, to use such technology when conducting air tours, and to include flight monitoring data in their semi-annual reports. The agencies consulted with the National Parks Overflights Advisory Group regarding the cost of various flight following technologies and found that there are relatively inexpensive off the shelf options that could meet the requirements of the ATMP. Though the agencies received comments suggesting alternative monitoring methodologies, including requiring equipping and using ADS-B systems (which, as explained above, is a system that periodically transmits location data information in real-time) or providing for monitoring by the public, the agencies declined to include such options in the ATMP. As long as the tracking technology selected by the operator meets the performance requirements in the ATMP, the agencies did not find it necessary to require operators to install and use a specific technology. Further, many air tour operators also provide other services to the public, State, and Federal agencies that are not air tours (e.g., survey flights, search and rescue, and firefighting), or conduct air tours that are not governed by this ATMP (i.e., are more than ½ mile outside the Park boundary). Requiring ADS-B as a method of compliance would place an undue burden on the agencies for processing, cross checking, and validating all observed flights. As to public monitoring, the agencies do not have the resources to stand up and staff a complaint response line and, given the monitoring measures included in the ATMP, such a line would be unnecessary. Further, given that commercial air tours are not the only flights conducted over Park, information from a public tip line would likely be less reliable as the public would likely have difficulty distinguishing between, for example, a commercial air tour flight and a general aviation flight. However, the ATMP acknowledges that the public may report allegations of

noncompliance to the appropriate FSDO. Written reports of noncompliance will be investigated by the relevant FSDO consistent with FAA Policy.

Though the agencies received comments complaining about the lack of specific penalties, the agencies do not believe it is necessary or appropriate at this time to set out a schedule of penalties for noncompliance, as instances of noncompliance are likely to be very fact specific, and may be justified by safety considerations. As to comments contending that unreported commercial air tours have occurred over the Park, the monitoring and reporting requirements in the ATMP mean that the agencies will be better able to determine whether commercial air tours have occurred that do not comply with or are not authorized by the ATMP. Section 4.0 provides that the appropriate FSDO will investigate reports of noncompliance and states that an administrative determination of noncompliance may result in loss of air tour allocations. However, the ATMP does not regulate flights over the Park that do not meet the definition of a commercial air tour, for example, general aviation flights.

- **Adaptive Management**

The provisions in Section 8.0 are included to allow minor modifications to the authorized operating parameters (for example, slight deviations in routes) to avoid adverse impacts to Park resources, values, or visitor experiences, address safety concerns, or address new information or changed circumstances. Such modifications could only be made through adaptive management if the impacts to Park resources are within the scope of impacts already analyzed under NEPA, the Endangered Species Act, and Section 106 of the National Historic Preservation Act. This process was designed to ensure that actions that are potentially more impactful to resources would only be made through the amendment process, which requires public participation, after further environmental compliance. At least one commenter expressed concern that adaptive management would be used to remove, or lessen, measures designed to mitigate impacts on Park resources and visitor experience or increase the number of commercial air tours allowed, but the agencies believe that the provisions of Section 8.0 are clear that adaptive management could not be used in this way. Authorization of additional air tours, beyond the those authorized in the ATMP, including an increase of commercial air tour operations authorized each year on designated routes or an increase or of the applicable daily caps on commercial air tour operations, would require an amendment to the ATMP, which requires public notice and comment as well as further environmental compliance.

- **Competitive bidding**

NPATMA requires that where an ATMP limits the number of authorized commercial air tours within a specific time frame, the agencies must develop an open and competitive process for evaluating competing proposals to conduct commercial air tours. 49 U.S.C. § 40128(a)(2)(B). At present, because the ATMP implements existing condition and restricts operators to designated routes that overfly different areas of the Park, the agencies do not plan to conduct a competitive bidding process for the Park. However, this does not preclude the agencies from holding a competitive bidding process in the future, consistent with NPATMA. The ATMP identifies conditions under which a competitive bidding process may be appropriate.

- **Quiet Technology Incentive**

The ATMP includes a quiet technology incentive that allows aircraft utilizing quiet technology to fly commercial air tours that begin at sunrise, or end at sunset, whereas non-quiet technology aircraft would be required to operate commercial air tours that begin two hours after sunrise or end two hours before sunset. Though many commenters on this and other draft ATMPs requested a definition for quiet technology, the agencies found that creating a definition for quiet technology in this ATMP was not practicable because aviation technology continues to evolve and advance and because the FAA periodically updates its noise certification standards. An aircraft that may qualify as quiet technology today may be out of date ten years from now. One commenter suggested that a specific aircraft be used for commercial air tours, but this suggestion was not adopted because it would be unnecessarily onerous on operators who often use a single aircraft for multiple purposes.

The agencies also declined to extend the definition of quiet technology established for commercial air tours over Grand Canyon National Park to the ATMPs developed under NPATMA. The standard for Grand Canyon National Park was developed pursuant to legislation specific to that park through a rulemaking process that was completed in 2005. That standard applies only to Grand Canyon National Park and was based on noise certification standards that are now more than 20 years old. Quiet aircraft technology has advanced substantially since that time. Further, the aircraft used to conduct air tours over Grand Canyon National Park are much larger than the aircraft used to conduct tours over Great Smoky Mountains National Park which would make those standards difficult to apply to the Park. The FAA now uses performance-based standards and therefore, using the definition applicable to Grand Canyon National Park would not be consistent with that change.

As noted above, the ATMP provides for a consultation with operators regarding which of their aircraft qualify for the incentive at the time this ATMP is implemented. Though some commenters requested that the incentive only apply to future aircraft purchases, the agencies included current aircraft in the incentive so as not to penalize early adopters of quiet technology. In the future, should operators wish to purchase new aircraft, the ATMP allows for consultation with the agencies before the operator makes the investment in a new aircraft to determine whether such aircraft would qualify for the incentive.

Some commenters questioned the effectiveness of the quiet technology incentive itself and its inclusion in the ATMP, while others suggested different or stricter quiet technology requirements or a requirement to use a specific type of aircraft.¹⁶ NPATMA requires a quiet technology incentive is required to be included in the ATMP. 49 U.S.C. § 40128(b)(3)(D). The agencies believe this incentive should be strong enough to encourage the adoption of quiet technology by operators balanced with the fact that quiet technology equipped aircraft still produce noise. The agencies believe the quiet technology incentive in the ATMP strikes the appropriate balance.

¹⁶ The agencies declined to adopt the suggestion that quiet technology aircraft be exempt from the ATMP's altitude restrictions because that restriction is in place to protect raptors.

- **Analysis of impacts**

Many commenters noted the lack of impact analysis in the ATMP. Impact analysis is not required content in an ATMP. However, the impacts of the ATMP were evaluated using an Environmental Screening Form to determine the applicability of a categorical exclusion and whether any extraordinary circumstances were present that would preclude the application of a categorical exclusion, consistent with NPS practice. Likewise, the FAA conducted an analysis of potential effects under Section 4(f) of the Department of Transportation Act and analyzed whether there were any extraordinary circumstances under FAA Order 1050.1F, Paragraph 5-2 and subsequently adopted the NPS's categorical exclusion determination under 40 CFR § 1506.3(d). The agencies acknowledge that no previous NEPA analysis of IOA occurred because the issuance of IOA for commercial air tours over the Park was a nondiscretionary action directed by Congress. Because of this, the agencies considered the impacts of air tours on the Park resources and visitor experience. There are numerous ways to measure the potential impacts of noise from commercial air tours on the acoustic environment of a park including intensity, duration, and spatial footprint of the noise. Several metrics were modeled and considered. The NPS considered maximum sound level (L_{Amax}) and the amount of time that aircraft from commercial air tour operations were above specific sound levels that relate to different Park management objectives (e.g., 35 and 52 decibels). The FAA used the average sound level over 12 hours (L_{Aeq}) in order to compute their standard noise metric of Day-Night Average Sound Level (DNL). The agencies used their respective modeling results to compare the acoustic environment at the Park with existing air tour operations to the predicted changes due to the mitigation measures under the ATMP.

The impact analysis provided in the Environmental Screening Form for this ATMP demonstrates that the ATMP does not result in significant impacts when considering the change from existing conditions. *See* Appendix B. The analysis also discloses the impacts associated with the use itself; the analysis evaluates the impacts of 946 commercial air tours over the Park, given the daily and route limitations included in the ATMP. The impacts of the action, whether evaluating the change from existing condition or the impacts from the air tours authorized under the ATMP, are minimal. Park resources and values impacted from air tours, including the acoustic environment, will continue to exist in a condition that will allow the American people to have present and future opportunities to enjoy them. *See* 2006 NPS Management Policies 1.4.4.

As to specific concerns regarding acoustic environment impacts noted by commenters, the ATMP includes several provisions that mitigate the on the ground effects of noise, including setting a minimum altitude of 2,600 ft. AGL, an annual limit on the number of air tours permitted over the Park, daily caps, designated routes, annual limits on certain routes, and concentrating most air tours over road transportation corridors. Section 3.3 of the ATMP specifically provides that "any new or replacement aircraft must not exceed the noise level produced by the aircraft being replaced." A plan amendment, supported by further environmental analysis, would be required to authorize operation of an aircraft that exceeds the noise level of the currently authorized aircraft.

The number of air tours, the route structure, and other operating parameters provided for under the ATMP are mostly the same as that which the operator conducted during the three years period immediately preceding the COVID-19 pandemic and therefore, the agencies did not find

that a study of economic impacts was warranted. The Environmental Screening Form does acknowledge the recent trend in air tours and potential for economic impacts and the economic effects of the ATMP are considered. The agencies found because the number of air tours authorized under the ATMP is the same as the average number of flights from the most recent three years (2017-2019) not affected by the COVID-19 pandemic, the ATMP is not expected to impact visitor spending on air tours or economic activity in the local communities. Air tours over the Park did increase in 2020 according to operator communications and reporting data though, as noted above. However, due to the pandemic, the agencies believe that 2017-2019 provide a more accurate trend of data for defining existing conditions.

Some commenters also expressed the position that air tours have less or different impacts than on-the-ground Park visitation. However, in analyzing the impacts of air tours on Park resources, the point was not to compare noise of air tours to vehicle traffic, but to develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the Park's natural and cultural resources and visitor experiences, and on tribal lands.

- **Wildlife**

As noted above, the agencies consulted with the U.S. Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act and have determined that air tours may affect but are not likely to adversely affect the federally listed Indiana bat, northern long-eared bat, and Carolina northern flying squirrel, or the tri-color bat and little brown bat, which are under review for federal listing. The U.S. Fish and Wildlife Service concurred with this finding. *See* Appendix E. Many commenters focused on potential effects to threatened and endangered species, which were addressed through the informal consultation process discussed above. However, many commenters also expressed general concerns about the potential effects of commercial air tours on wildlife. The ATMP implements a minimum altitude for all commercial air tours of 2,600 ft. AGL which minimizes the potential for disturbance of natural habitat and wildlife. Though there currently is no minimum altitude, both operators report that they fly between 1,000 ft. and 1,500 ft. AGL on all routes, which means that the ATMP requires commercial air tours to fly 1,100 ft. to 1,600 ft. higher than the current condition. Though the minimum altitude of 2,600 ft. AGL is largely in place to protect bird species that can be found at higher altitudes or may be nesting, the altitude restriction also reduces noise impacts of commercial air tours on other species.

The operating parameters included in the ATMP were developed in consideration of Park management objectives such as wildlife and visitors. Given the limited number of flights per year, daily caps, the limited duration of any potential noise exposure, minimum altitude requirement, the route structure in place, the low sound levels associated with air tours over the Park and the protections included in the ATMP, there will not be any significant adverse effects to the Park's wildlife. The ATMP also provides for adaptive management measures to be taken which could be used to address unanticipated effects to wildlife. The ATMP's adaptive management provision is addressed above.

- **Wilderness**

Many commenters noted concerns related to the protection of wilderness and some commented that the Wilderness Act prohibits commercial air tours. Though there is no

Congressionally designated wilderness within the Park, it contains recommended and proposed wilderness that the NPS manages as designated wilderness pursuant to its 2006 NPS Management Policies. Neither the Management Policies nor Wilderness Act prohibit overflights and no commercial air tours are permitted to land in the Park. Though NPATMA does not require the ATMP to include analysis of impacts to wilderness, consistent with the requirements of NEPA, the agencies evaluated the impacts of the commercial air tours authorized by the ATMP on the qualities of wilderness character in the development of the ATMP, including impacts on the opportunity for solitude, impacts to the natural quality of wilderness, and impacts to other features of value, which is documented in the Environmental Screening Form, Appendix B. The analysis demonstrates that noise from air tours may temporarily disrupt the opportunity for solitude in wilderness for some visitors. The ATMP includes restrictions that are protective of wilderness character, setting a minimum altitude of 2,600 ft. AGL, implementing annual and daily caps on air tours, restricting on the number of air tours that spend more time over the Park's backcountry (Blue and Black routes). The low sound levels, and the limited duration of potential exposure of air tours authorized by the ATMP make it unlikely that most visitors will encounter noise from air tours within wilderness. If a wilderness visitor does hear noise from an air tour, it is unlikely that the visitor will hear more than a few flights per visit and is likely that the visitor will experience the noise for a very short duration of time and at a very low sound level. Under the ATMP visitors can still experience solitude and the sounds of nature during their visit. Accordingly, the NPS found that the ATMP is protective of wilderness character and to be consistent with the Park's enabling legislation, the 2006 NPS Management Policies, and the requirements of NPATMA.

- **Interim Operating Authority**

Mountain Helicopter applied for, and FAA granted, IOA for the Park and Cherokee tribal lands that would allow it to conduct up to 120 commercial air tours per year. *See* 70 Fed. Reg. 36,456 (June 23, 2005). Rambo Helicopter Charter, Inc. (now Whirl'd Helicopters) applied for IOA for the Park that would allow it to conduct up to 1800 commercial air tours per year, *id.*, and its OpSpecs reflect IOA for 1,800 air tours per year over Cherokee tribal lands. The IOA issued to both operators for Cherokee tribal lands was coextensive with and issued in connection with the IOA for the Park. Because NPATMA provides that IOA terminates on the establishment of an ATMP and provides that an ATMP extends ½ mile outside the boundary of a National Park System unit, the IOA issued for Cherokee tribal lands was limited to those portions of the Eastern Cherokee Indian Reservation that within that area. IOA for Cherokee tribal lands did not apply to those portions of the Eastern Cherokee Indian Reservation or any other Cherokee lands that are more than ½ mile outside the Park and the regulatory status of those lands remains unchanged by the ATMP.

The ATMP provides that the FAA, through the appropriate FSDO, will update the OpSpecs of all operators with IOA for the Park to incorporate the terms of the ATMP within 90 days of the date on which the ATMP is fully signed (meaning 90 days from the date on which the ATMP has been signed by all required signatories). The operators' OpSpecs currently allow them to overfly the Park, and those portions of the Eastern Cherokee Indian Reservation within ½ mile of the Park's boundary, in accordance with their IOA. As noted above, the ATMP does not authorize any commercial air tour routes that fly over any portion of the Eastern Cherokee Indian Reservation. Once the OpSpecs are modified, only those operators that hold allocations of

operations under the ATMP will be permitted to conduct commercial air tours over the Park, or outside the Park but within ½ mile of its boundary, including any Cherokee tribal lands within that area, and then all commercial air tours conducted will be required to comply with the ATMP in all respects, except that operators have 180 days to equip their aircraft with suitable flight monitoring technology.

- **Voluntary Agreement**

In its comments on the draft ATMP, Whirl'd Helicopters suggested that the agencies enter into a voluntary agreement with it as an alternative to the ATMP. The terms of the suggested voluntary agreement would differ from the ATMP in that the proposed voluntary agreement would: only be between the agencies and Whirl'd Helicopters and would not include Mountain Helicopter; authorize Whirl'd Helicopters to conduct up to 1,800 commercial air tours per year rather than the 864 authorized by the ATMP; expand the daytime hours during which air tours could be conducted using non-quiet technology; not include any daily cap on the number of air tours that may be conducted; not include any caps on the air tours that may be conducted on the Blue or Black Routes; and, require Whirl'd Helicopters to contribute a \$25 fee to the Park per air tour.

The agencies decided not to pursue a voluntary agreement with the operator. As explained in the Compliance Plan, in order to bring all parks into compliance with NPATMA in the time frame contemplated by the Court, the agencies determined that it was no longer feasible to move forward with their previously stated preference to attempt first to reach voluntary agreements with operators before transitioning to preparation of an ATMP. As compared to a voluntary agreement process, the agencies have more control over an ATMP process. As only one of the two operators with IOA for the Park has suggested entering into an agreement, there is no guarantee that the other operator, Mountain Helicopter would enter into an agreement, or that it would do so in a timely manner. Even if both operators entered timely into a voluntary agreement, they could later withdraw from that agreement and continue flying consistent with IOA, meaning that the Park would again be out of compliance with NPATMA without any of the protective provisions included in the ATMP. Establishing an ATMP for the Park will bring the Park into compliance with NPATMA and provide certainty that the Park will remain so and that the NPS will achieve its management objectives.

Further, the voluntary agreement suggested by Whirl'd Helicopters would not, in the NPS's view, meet the requirements of NPATMA because it would not address the management issues necessary to protect Park resources and visitor use. *See* 49 USC 40128 (b)(7)(iii). Under the proposed voluntary agreement, the number of authorized air tours over the Park would nearly double, the number of air tours authorized over backcountry areas of the Park would more than double, and the daytime hours during which non-quiet technology tours could be conducted would be expanded by two hours. The proposed voluntary agreement excludes the protective daily air tour caps, and exclude the annual caps on tours flying the Blue and Black Routes that spend the most time over the Park and penetrate the furthest into the Park's backcountry. As to the operator's offer to collect and contribute a \$25 fee to the Park which is allowed under a voluntary agreement, 49 U.S.C. § 40128(b)(7)(B)(3), this would not address the Park management and NPATMA compliance issues identified above.

- **Providing access for individuals with disabilities**

Some commenters requested expanded air tours in order to accommodate or expand access to individuals with disabilities, older persons, or those with mobility issues. However, air tours are not the only way for a person with a disability or a mobility issue to experience a national park. The NPS works to ensure that people with disabilities can participate in the same programs and activities available to those without disabilities in the most integrated setting possible. The NPS has a full team dedicated to breaking physical and programmatic barriers to make parks more inclusive for people with sensory, physical, and cognitive disabilities including a full accessibility program with accessibility coordinators in all 12 NPS regions who work to make sure that NPS staff have the tools and training necessary to provide accessible and inclusive outdoor recreation and interpretation opportunities for park visitors and employees alike. Information regarding accessibility at Great Smoky Mountains National Park is available at: <https://www.nps.gov/grsm/planyourvisit/accessibility.htm>

- **NEPA compliance**

Commenters in general noted concerns that an environmental analysis was not released for public review and comment and either advocated for the consideration of various alternatives or criticized that consideration and analysis of alternatives was required under NEPA. Consistent with the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA, agencies may, but are not required to, develop a range of alternatives to the proposed action when using a categorical exclusion to comply with NEPA. *See* 40 CFR §§ 1501.4, 1502.14. Actions covered by categorical exclusions by definition do not have significant impacts and therefore are not subject to the requirement to develop alternatives to reduce significant impacts. In this case, the agencies evaluated the potential impacts of the proposed action (ATMP) compared to current conditions and determined that the proposed ATMP would not result in significant impacts to Park resources. The agencies considered actions to reduce impacts to Park resources and included those in the ATMP, e.g., altitude and route restrictions. Public review of categorical exclusions is not required. Though NPATMA provides that both agencies must “sign the environmental decision document required by section 102 of [NEPA] which may include a finding of no significant impact, an environmental assessment, or an environmental impact statement and the record of decision” the agencies do not interpret NPATMA to preclude the application of a categorical exclusion for an ATMP. *See* 49 U.S.C. § 40128(b)(2).

- **Tribal consultation**

The tribal consultation conducted by the agencies prior to the signing of this ROD is described above in the section that discusses the agencies’ compliance with the National Historic Preservation Act. The agencies remain committed to engaging in tribal consultation after the ATMP is implemented to address ongoing tribal concerns as needed. The NPS regularly meets with tribes that are culturally affiliated with the Park and can discuss potential impacts of air tours at those meetings. Further, the ATMP itself includes mechanisms that could be used to address tribal concerns post-implementation. Section 3.5 of the ATMP authorizes the NPS to set temporary no-fly periods for special events, including tribal events, ceremonies, or other practices, with advance notice to the operators. Section 8.0 of the ATMP provides for adaptive management measures to be taken as a result of tribal input or information received through

tribal consultation, without a formal plan amendment if the impacts of any changes are within the impacts already analyzed by the agencies in their compliance documentation for the ATMP. If tribal concerns cannot be addressed through adaptive management, the agencies may consider amending the ATMP consistent with the process outlined in Section 9.0 of the ATMP. In addition, the aircraft monitoring technology that operators are required to install and use (Section 4.0), coupled with the ATMP's reporting requirements (Section 3.6), will not only aid the agencies in ensuring compliance with the terms and conditions of the ATMP, but will also aid in determining whether overflights that are concerning to tribes are commercial air tours, or another type of overflight not subject to the requirements of NPATMA.

- **Compliance with NPS-specific laws and policies**

In managing National Park System units, the NPS is bound by the Organic Act of 1916, 54 U.S.C. §§ 100101 *et seq.*, which requires the NPS to manage parks “to conserve the scenery, natural and historic objects, and wild life in the System units and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.” In addition, NPS management of System units is guided by the 2006 NPS Management Policies and other policy and guidance documents that do not apply to the FAA. The Statement of Compliance appended to this ROD as Appendix G details the NPS's compliance with its Organic Act, as well as NPS policy documents.

DECISION

The undersigned have carefully considered the agencies' common and respective goals in relation to the issuance of an Air Tour Management Plan for Great Smoky Mountains National Park including the environmental impacts of their decision, the mitigation measures available to preserve Park resources, visitor experience and tribal lands, and aviation safety. Based on the record of this proposed Federal action, and under the authority delegated to the undersigned by the Administrator of the FAA and the Director of the NPS, the undersigned find that the issuance of the Air Tour Management Plan for Great Smoky Mountains National Park is reasonably supported. The undersigned hereby direct that action be taken, together with the necessary related and collateral actions, to carry out the agency decisions as detailed in this ROD including the issuance of an Air Tour Management Plan for Great Smoky Mountains National Park and issuance or modification of applicable operations specifications.

Approved by:

MARK FOUST Digitally signed by MARK FOUST
Date: 2022.12.02 14:58:34 -05'00'

Mark A. Foust
Regional Director
Interior Region 2: South Atlantic-
Gulf
National Park Service

**MICHAEL C
O'HARRA** Digitally signed by MICHAEL C
O'HARRA
Date: 2022.12.01 09:27:38 -05'00'

Michael C. O'Harra
Regional Administrator
Southern Region
Federal Aviation Administration

**RAYMOND
SAUVAJOT** Digitally signed by RAYMOND
SAUVAJOT
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Raymond M. Sauvajot
Associate Director
Natural Resource Stewardship and
Science Directorate
National Park Service

**KEVIN W.
WELSH** Digitally signed by KEVIN W.
WELSH
Date: 2022.11.30 16:31:18 -05'00'

Kevin Welsh
Executive Director
Office of Environment & Energy
Federal Aviation Administration

RIGHT OF APPEAL

This Record of Decision constitutes a final order of the FAA Administrator and is subject to exclusive judicial review under 49 U.S.C. § 46110 by the U.S. Circuit Court of Appeals for the District of Columbia or the U.S. Circuit Court of Appeals for the circuit in which the person contesting the decision resides or has its principal place of business. Any party having substantial interest in this order may apply for review of the decision by filing a petition for review in the appropriate U.S. Court of Appeals no later than 60 days after the order is issued in accordance with the provisions of 49 U.S.C. § 46110.

Appendices

- A. Air Tour Management Plan for Great Smoky Mountains National Park
- B. Environmental Screening Form
- C. Categorical Exclusion Documentation Form
- D. FAA Categorical Exclusion Adoption
- E. Endangered Species Act: Section 7 Compliance Documentation
- F. National Historic Preservation Act: Section 106 Compliance Documentation
- G. NPS Statement of Compliance
- H. Summary of Public Comments and Comment Analysis on the Draft Air Tour Management Plan for Great Smoky Mountains National Park

APPENDIX A

Final Air Tour Management Plan for Great
Smoky Mountains National Park

**FINAL AIR TOUR
MANAGEMENT PLAN
GREAT SMOKY MOUNTAINS NATIONAL PARK**

SUMMARY

This Air Tour Management Plan (ATMP) provides the terms and conditions for commercial air tours conducted over Great Smoky Mountains National Park (Park) pursuant to the National Parks Air Tour Management Act (Act) of 2000.

1.0 INTRODUCTION

The Act requires that commercial air tour operators conducting or intending to conduct commercial air tours over a unit of the National Park System apply to the Federal Aviation Administration (FAA) for authority before engaging in that activity. The Act further requires that the FAA in cooperation with the National Park Service (NPS) establish an ATMP for each National Park System unit for which one or more applications has been submitted, unless that unit is exempt from this requirement.¹

The objective of this ATMP is to develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tours on natural and cultural resources, visitor experiences and tribal lands.

2.0 APPLICABILITY

This ATMP applies to all commercial air tours over the Park and commercial air tours within ½ mile outside the boundary of the Park, including any tribal lands within that area, as depicted in Figure 1 below. A commercial air tour subject to this ATMP is any flight, conducted for compensation or hire in a powered aircraft where a purpose of the flight is sightseeing over the Park, or within ½ mile of the Park boundary, during which the aircraft flies:

- (1) Below 5,000 feet above ground level (except solely for the purposes of takeoff or landing, or necessary for safe operation of an aircraft as determined under the rules and regulations of the FAA requiring the pilot-in-command to take action to ensure the safe operation of the aircraft); or
- (2) Less than one mile laterally from any geographic feature within the Park (unless more than ½-mile outside the Park boundary).

See 14 CFR § 136.33(d).

¹ The Act provides an exemption to the ATMP requirement for parks with 50 or fewer commercial air tour operations each year unless the exemption is withdrawn by the Director of the NPS. *See* 49 U.S.C. § 40128(a)(5). As an alternative to an ATMP, the agencies also have the option to execute voluntary agreements with all operators operating at any of the parks.

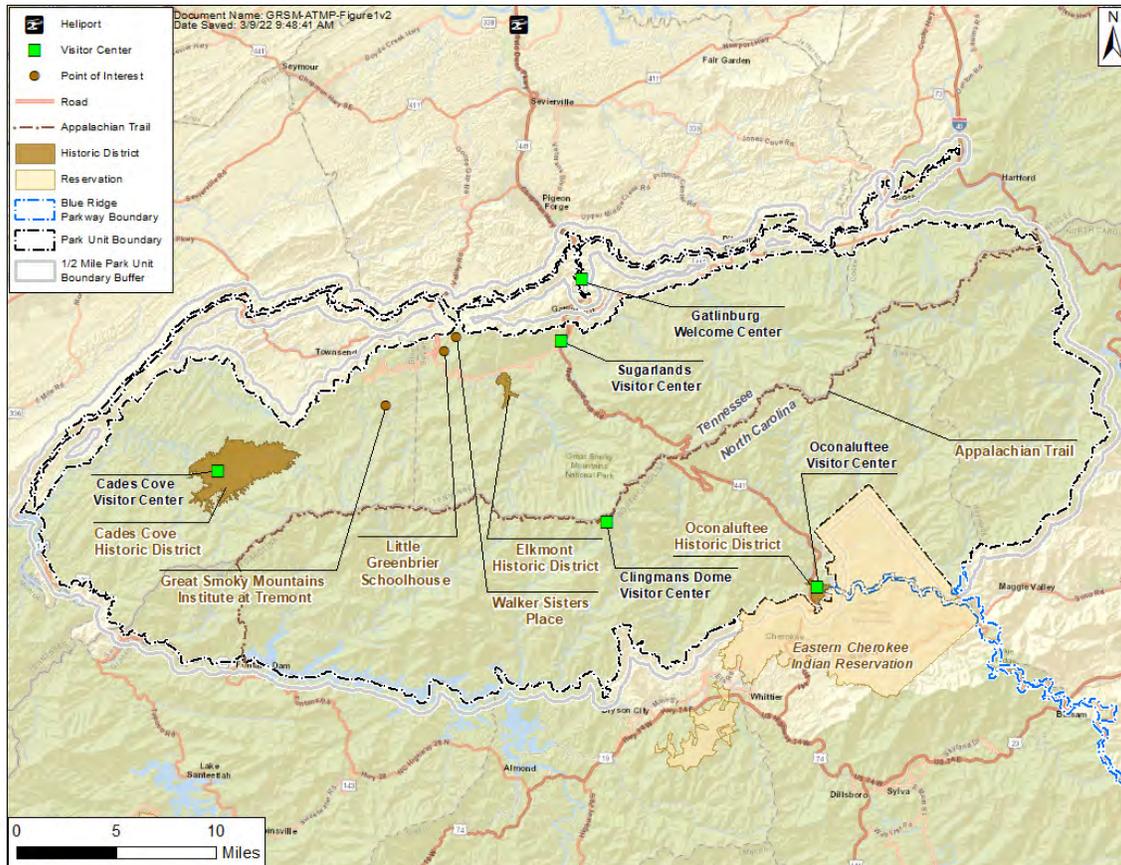


Figure 1. Map of area subject to the ATMP for Great Smoky Mountains National Park

2.1 Park Overview

World renowned for its diversity of plant and animal life, the beauty of its ancient mountains, and its remnants of Southern Appalachian mountain culture, the Park is America's most visited national park with over 12 million visitors per year. The Park is located in the Southern Appalachian Mountains and straddles the border between North Carolina and Tennessee. The Park comprises a total of 522,000 acres, of which 464,544 acres are recommended and proposed wilderness², representing approximately 89% of the Park. The Park provides habitat for numerous federally threatened and endangered species, including the Carolina northern flying squirrel, gray bat, northern long-eared bat, and Indiana bat, as well as sensitive species such as the bald eagle and peregrine falcon.

The Appalachian National Scenic Trail, a separate National Park System unit, runs through the Park. The Appalachian National Scenic Trail is a cultural resource eligible for inclusion on the National Register of Historic Places (National Register).

² In compliance with NPS 2006 Management Policies, recommended and proposed wilderness are managed the same as Congressionally designed Wilderness.

The Park contains numerous other National Register eligible or listed cultural resources, including but not limited to the following listed sites:

- Cades Cove Historic District (National Register Listed - 1977): The Cades Cove Historic District protects and interprets European-American settlements that occurred between 1818 and 1821. Native American presence in the area extends back centuries. The Cades Cove Historic District offers the widest variety of historic buildings of any area in the Park. It is also known for the large numbers of white-tailed deer frequently seen in the area, and sightings of black bear, coyote, groundhog, turkey, raccoon, and skunk, many of which were historically hunted by the Cherokee Indians. Approximately 2.1 million visitors spent time experiencing the Cades Cove Historic District in 2019.
- Elkmont Historic District (National Register Listed - 1994): The Elkmont Historic District protects and interprets eighteen of the cabins associated with the Appalachian Club. Nearly 90,000 registered visitors camped at Elkmont Campground in 2019.
- Walker Sisters Place (National Register Listed - 1976): This historic site protects and interprets a late 19th century homestead.
- Little Greenbrier Schoolhouse (National Register Listed - 1976): This historic site protects and interprets a late 19th/early 20th century mountain schoolhouse. Interpretive events are regularly scheduled throughout the year to allow visitors to participate with a former school teacher who provides lessons about life for the students and families that once lived in the area.

The Park also offers outdoor experiential education programs at the Great Smoky Mountains Institute at Tremont (Tremont).

The Eastern Cherokee Indian Reservation is adjacent to the Park in North Carolina and thus tribal lands of the Eastern Band of Cherokee Indians are located outside the Park but within ½ mile of its boundary.

The purposes of the Park are to preserve a vast expanse of the southern Appalachian Mountains ecosystem including its scenic beauty, extraordinary diversity of natural resources, cultural resources, and rich human history, that together provide opportunities for the enjoyment and inspiration of present and future generations. The following Park management objectives related to ATMP development will ensure:

- Park acoustic resources (i.e., sounds within the Park) are in a natural condition and support an outstanding visitor experience and opportunities to hear and enjoy natural sounds.
- Acoustic resources of the Park are maintained such that wilderness character (solitude or primitive and unconfined recreation, including remoteness from sights and sounds; untrammled or wildness; naturalness; undeveloped; other features or values) is preserved.
- Park staff can conduct, and visitors are able to experience, interpretive programming with minimal interference due to noise.

- Natural sounds are protected to conserve healthy and robust wildlife populations. Natural biological and ecological processes should dominate the sounds within the Park.
- Inappropriate or excessive types and levels of noise are prevented from unacceptably impacting the ability of the soundscape to transmit the cultural and historic resource sounds, as well as the visitor's experience of those resources.

3.0 CONDITIONS FOR THE MANAGEMENT OF COMMERCIAL AIR TOUR OPERATIONS

3.1 Commercial Air Tours Authorized

Under this ATMP, 946 commercial air tours are authorized per year. Appendix A identifies the operators authorized to conduct commercial air tours and annual flight allocations.

3.2 Commercial Air Tour Routes and Altitudes

Commercial air tours authorized under this ATMP shall be conducted on designated air tour routes specific to each operator as depicted in Figure 2³ and as described below:

Whirl'd Helicopters, Inc.:

- Red Route (SNPF): Air tours along the Red Route will follow the road corridors of Highway 321, Highway 441, Little River Road, and Wear Cove Gap Road. As this route turns north to exit the Park, the route will fly west of Wear Cove Gap Road.
- Light Blue Route (SSMF): Air tours along the Light Blue Route will enter the Park following along the road corridors of Highway 321 and Highway 441. Air tours on the Light Blue Route will stay at least one-mile south of the Elkmont Historic District and Tremont.
- Black Route (SGTF): Air tours along the Black Route will enter the Park following along the road corridors of Highway 321 and Highway 441. Air tours will stay at least one-half mile north of the Appalachian National Scenic Trail and one mile north of Cades Cove Historic District.
- Blue Route (SMSF): Air tours along the Blue Route will stay at least one-half mile north of the Appalachian National Scenic Trail and one mile north of Cades Cove Historic District.

Great Smoky Mountain Helicopter Inc.:

- Orange Route (Gatlinburg): Air tours along the Orange Route will cross over the Foothills Parkway west of Gatlinburg, head east over the Hwy 321 spur of the Foothills Parkway, and then exit back over the Foothills Parkway east of

³ Appendix B contains an enlarged Figure 2.

Gatlinburg. This route will only overfly the Foothills Parkway and will stay at least ½ mile outside of the remainder of the Park.

- **Purple Route (Grand Tour/See It All):** Air tours along the Purple Route will fly over the Foothills Parkways along the Hwy 321 spur heading south. The tour routes will then head west and exit the Park west of Gatlinburg. This route will only overfly the Foothills Parkway and will stay at least ½ mile outside of the remainder of the Park.

Altitude expressed in units above ground level (AGL) is a measurement of the distance between the ground surface and the aircraft. Air tours will fly no lower than 2,600 feet (ft.) AGL when over the Park or within ½ mile of the Park boundary. Except in an emergency or to avoid unsafe conditions, or unless otherwise authorized for a specified purpose, operators may not deviate from these designated routes and altitudes.

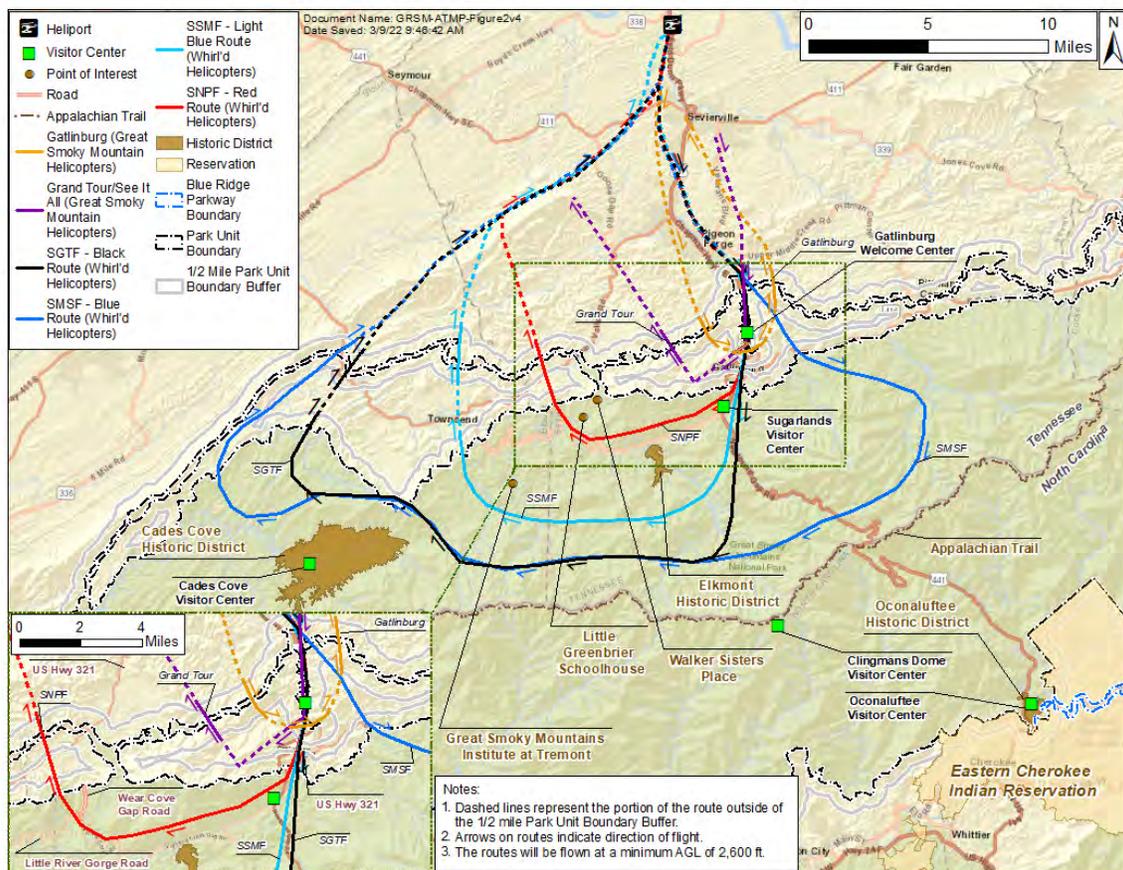


Figure 2. Commercial air tour routes over Great Smoky Mountains National Park

3.3 Aircraft Type

The aircraft types authorized to be used for commercial air tours are identified in Appendix A. Any new or replacement aircraft must not exceed the noise level produced by the aircraft being replaced. In addition to any other applicable notification requirements, operators will notify the FAA and the NPS in writing of any prospective

new or replacement aircraft and obtain concurrence before initiating air tours with the new or replacement aircraft.

3.4 Day/Time

Except as provided in Section 3.8 below, “Quiet Technology Incentives,” air tours may operate two hours after sunrise until two hours before sunset, as defined by the National Oceanic and Atmospheric Administration (NOAA).⁴ Air tours may operate any day of the year, except under circumstances provided in Section 3.5 “Restrictions for Particular Events.”

3.5 Restrictions for Particular Events

The NPS can establish temporary no-fly periods that apply to commercial air tours for special events or planned Park management. Absent exigent circumstances or emergency operations, the NPS will provide a minimum of one month notice to the operators in writing in advance of the no-fly period. Events may include tribal ceremonies or other similar events.

3.6 Required Reporting

Operators will submit to the FAA and the NPS semi-annual reports regarding the number of commercial air tours over the Park or within ½ mile of its boundary that are conducted by the operator. These reports will also include the flight monitoring data required under Section 4.1 of this ATMP and such other information as the FAA and the NPS may request. Reports are due to both the FAA and the NPS no later than 30 days after the close of each reporting period. Reporting periods are January 1 through June 30 and July 1 through December 31. Operators shall adhere to the requirements of any reporting template provided by the agencies.

3.7 Additional Requirements

3.7A Operator Training and Education: When made available by Park staff, operators/pilots will take at least one training course per year conducted by the NPS. The training will include the Park information that operators can use to further their own understanding of Park priorities and management objectives as well as enhance the interpretive narrative for air tour clients and increase understanding of parks by air tour clients.

3.7B Annual Meeting: For the first five years after the signing of the ATMP, the Park staff, the local FAA Flight Standards District Office (FSDO), and all operators will meet once per year to discuss the implementation of this ATMP and any amendments or other changes to the ATMP. Thereafter, this annual

⁴ Sunrise and sunset data is available from the NOAA Solar Calculator, <https://www.esrl.noaa.gov/gmd/grad/solcalc/>

meeting will occur if requested by either of the agencies. This annual meeting could be conducted in conjunction with any required annual training.

3.7C In-Flight Communication: For situational awareness when conducting tours of the Park, the operators will utilize frequency 122.9 and report when they enter and depart a route. The pilot should identify their company, aircraft, and route to make any other aircraft in the vicinity aware of their position.

3.7D Route Allocations: This ATMP authorizes Whirl'd Helicopters, Inc. to fly up to 26 flights on the Black Route (SGTF) and up to 17 flights on the Blue Route (SMSF) per year.

3.7E Daily Air Tour Allocations: This ATMP includes restrictions on the number of air tours that the operators may conduct each day. These restrictions provide a maximum number of air tours that may be conducted on Standard Days, but allow for a limited number of Flex Days on which the maximum number of air tours allowed are slightly higher.

Whirl'd Helicopters, Inc. may conduct up to 4 commercial air tours per day, and Great Smoky Mountain Helicopter Inc. may conduct up to 1 commercial air tour per day on Standard Days. The operators are each authorized up to forty days per year (Flex Days) during which Whirl'd Helicopters, Inc. may conduct up to 5 commercial air tours per day, and Great Smoky Mountain Helicopter Inc. may conduct up to 2 commercial air tours per day.

3.7F Hovering: Aircraft will not hover or loop while conducting air tours over the Park or within ½ mile of the Park boundary.

3.7G Non-transferability of Allocations: Annual operations under this ATMP are non-transferable. An allocation of annual operations may be assumed by a successor purchaser that acquires an entity holding allocations under this ATMP in its entirety. In such case, the prospective purchaser shall notify the FAA and NPS of its intention to purchase the operator at the earliest possible opportunity to avoid any potential interruption in the authority to conduct commercial air tours under this ATMP. This notification must include a certification that the prospective purchaser has read and will comply with the terms and conditions in the ATMP. The FAA will consult with the NPS before issuing new or modified operations specifications (OpSpecs) or taking other formal steps to memorialize the change in ownership.

3.8 Quiet Technology Incentives

This ATMP incentivizes the use of quiet technology aircraft by commercial air tour operators. Operators that have converted to quiet technology aircraft, or are considering converting to quiet technology aircraft, may request to be allowed to conduct air tours beginning at sunrise or ending at sunset on all days that flights are authorized. Because aviation technology continues to evolve and advance and the FAA updates its noise certification standards periodically, the aircraft eligible for this incentive will be analyzed on a case-by-case basis at the time of the operator's request to be considered for this

incentive. The NPS will periodically monitor Park conditions and coordinate with the FAA to assess the effectiveness of this incentive. If implementation of this incentive results in unanticipated effects on Park resources or visitor experience, further agency action may be required to ensure the protection of Park resources and visitor experience.

4.0 COMPLIANCE

On the effective date of this ATMP, all commercial air tours over the Park or within ½ mile of the Park boundary must comply with the terms of this ATMP in all respects, except as provided in Section 4.1 below. The NPS and the FAA are both responsible for the monitoring and oversight of the ATMP. If the NPS identifies instances of non-compliance, the NPS will report such findings to the FAA's FSDO with geographic oversight of the Park. The public may also report allegations of non-compliance with this ATMP to the FSDO. The FSDO will investigate and respond to all written reports consistent with applicable FAA guidance.

Investigative determination of non-compliance may result in partial or total loss of authorization to conduct commercial air tours authorized by this ATMP. Any violation of OpSpecs shall be treated in accordance with FAA Order 2150.3, *FAA Compliance and Enforcement Program*.

4.1 Aircraft Monitoring Technology

Operators are required to equip all aircraft used for air tours with flight monitoring technology, to use flight monitoring technology during all air tours under this ATMP, and to report flight monitoring data as an attachment to the operator's semi-annual reports. The required flight monitoring data shall be provided in a file format approved by the agencies, such as a .csv or .xlsx format. Data must include the following information for each row of data (i.e., each ping):

- Unique flight identifier
- Latitude
- Longitude
- Geometric altitude
- Tail number
- Date
- Time stamp
- Operator and Doing Business As (DBA), if different
- Aircraft type
- Aircraft model

The ping rate should be set to a maximum of 15 seconds. Operators already using aircraft equipped with flight monitoring technology shall ensure it meets the performance standards listed above or acquire and install acceptable flight monitoring technology within 180 days of the effective date of this ATMP. For aircraft not already equipped with flight monitoring technology, within 180 days of the effective date of this ATMP, operators shall equip those aircraft with suitable flight monitoring technology.

5.0 JUSTIFICATION FOR MEASURES TAKEN

The provisions and conditions in this ATMP are designed to protect Park resources, visitor experience, and tribal lands from the effects of commercial air tours, and to support NPS management objectives for the Park.

Under the Act, the FAA was required to grant Interim Operating Authority (IOA) for commercial air tours over the Park or within ½ mile of the Park's boundary and Cherokee tribal lands that are outside of the Park but within ½ mile of its boundary. IOA does not provide any operating conditions (e.g., routes, altitudes, time of day, etc.) for air tours other than an annual limit.

The total number of air tours authorized under this ATMP is consistent with the existing air tours reported over the Park. The flight limit authorizing a maximum of 946 commercial air tours per year and designated routes in this ATMP are intended to protect visitor experience (including NPS interpretive programs), tribal use, backcountry experience and wilderness character, cultural resources throughout the Park, and the Park's natural resources (including the Park's acoustic environment and wildlife) by limiting the number of potential disturbances caused by commercial air tours. The more restrictive annual flight limits on the Black Route (SGTF) and Blue Route (SMSF) are further intended to protect the acoustic environment, backcountry experience, and wilderness character in the Park. These routes fly much further into the Park which can create noise in otherwise quiet and noise sensitive areas, including the backcountry of the Park. These longer routes also have much larger noise footprints and produce much longer durations of noise than other routes.

The daily operation limits included in this ATMP in the form of Standard Days and Flex Days are similarly intended to reduce the number of intrusions of non-natural sounds across the Park and to protect backcountry character, visitors' ability to hear natural sounds, interpretive programs and visitor experience, and cultural sites. These limits are consistent with existing daily air tour operations reported over the Park.

Routes assigned as part of this ATMP are intended to protect the Park's visitor experience and acoustic resources by aligning flight routes with existing transportation corridors, avoiding noise-sensitive wildlife habitat, and avoiding cultural resources. Aligning routes with transportation corridors including Highway 321, Highway 441, Little River Road, and Wear Cove Gap Road helps mask noise created by air tours. The ATMP does not authorize any air tour routes over the tribal lands of the Eastern Band of Cherokee Indians and does not authorize any air tour routes over or within ½ mile of the Appalachian National Scenic Trail. Other specific resource protection measures associated with each route include the following:

- Red Route (SNPF): The placement of the Red Route avoids Elkmont Historic District, Walker Sisters Place, and Little Greenbrier School, which are noise-sensitive cultural resources in the Park.
- Light Blue Route (SSMF): The placement of the Light Blue Route avoids Elkmont Historic District and Great Smoky Mountains Institute at Tremont and is

- intended to protect noise-sensitive cultural resources and education/interpretive programming at the Park.
- Black Route (SGTF): The placement of the Black Route avoids the Appalachian National Scenic Trail and Cades Cove Historic District, which are noise-sensitive cultural resources in the Park.
 - Blue Route (SMSF): The placement of the Blue Route avoids the Appalachian National Scenic Trail and Cades Cove Historic District, which are noise-sensitive cultural resources in the Park.

The altitude restrictions in this ATMP are consistent with the National Bald Eagle Management Guidelines (2007)⁵ and applicable raptor protection guidelines.⁶ Altitude restrictions also improve conditions for other species of wildlife, specifically avian species and migratory avian species.⁷ Eagle and raptor nests and habitat exist throughout the Park, and nest locations may change over time. Therefore, the minimum altitude extends uniformly across the entire Park and within ½ mile of its boundary. Additionally, the altitude restrictions protect backcountry visitor experience and wilderness character.

Sunrise and sunset are important times of the day for wildlife and visitor use and experience. Biologically important behaviors for many species occur during this time, such as the dawn chorus for songbirds. Wildlife viewing is often conducted during this time of day as well. Day/time restrictions have been included in this ATMP to protect these Park resources. Restrictions for particular events are intended to prevent noise interruptions of Park events or tribal practices.

Operator training and education will provide opportunities to enhance the interpretive narrative for air tour clients and increase understanding of parks by air tour companies and their clients.

The annual meeting will facilitate effective implementation of the ATMP because it will be used to review and discuss implementation of this ATMP between Park staff, local FAA FSDO, and all operators. It will thus serve to ensure that air tour operators remain informed regarding the terms and conditions of this ATMP, including any adaptive management measures or amendments, and are made aware of new or reoccurring concerns regarding Park resources.

The requirements to equip aircraft with flight monitoring technology, use flight monitoring technology during all air tours under this ATMP, and to report flight monitoring data as an attachment to the operator's semi-annual reports are necessary to

⁵ National Bald Eagle Management Guidelines (2007), U.S. Fish and Wildlife Service; The Bald and Golden Eagle Protection Act, 16 U.S.C. § 668 et seq.

⁶ Richardson, C. & Miller C., (1997). Recommendations for protecting raptors from human disturbance: A review. *Wildlife Society Bulletin*, 25(3), 634-638.; *See also* Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors, Colorado Division of Wildlife (2008). The peregrine falcon is protected under the Migratory Bird Treaty Act. The peregrine falcon is a state-listed species in both North Carolina and Tennessee and as an endangered species in Tennessee.

⁷ The Migratory Bird Treaty Act, 16. U.S.C. § 703 et seq.

enable the agencies to appropriately monitor operations and ensure compliance with this ATMP.

6.0 NEW ENTRANTS

For the purposes of this ATMP, a “new entrant” is a commercial air tour operator that has not been granted any operations under this ATMP or that no longer holds operations under this ATMP at the time of the application. New entrants must apply for and be granted operating authority before conducting commercial air tours over the lands and waters covered by this ATMP.

The FAA and the NPS will publish additional information for interested parties about the form and required content of a new entrant application. The FAA and the NPS will jointly consider new entrant applications and determine whether to approve such applications. Review of applications submitted prior to the effective date of this ATMP will commence within six months of the effective date. Applications submitted after that time will be considered no less frequently than every three years from the effective date of this ATMP.

If any new entrant is granted operating authority under this ATMP, the FAA will issue OpSpecs (and, if necessary, will revise OpSpecs of operators whose allocation of operating authority changes due to accommodation of a new entrant) within 90 days of the publication of an amended ATMP or of the effective date of ATMP changes implemented through the adaptive management process.

7.0 COMPETITIVE BIDDING

When appropriate, the FAA and the NPS will conduct a competitive bidding process pursuant to the criteria set forth in 49 U.S.C. § 40128(a)(2)(B) and other criteria developed by the agencies. Competitive bidding may be appropriate to address: a new entrant application; a request by an existing operator for additional operating authority; consideration by the agencies of Park-specific resources, impacts, or safety concerns; or for other reasons.

The agencies will request information necessary for them to undertake the competitive bidding process from operators. Operators who do not provide information in a timely manner may be disqualified from further consideration in the competitive bidding process.

Competitive bidding may necessitate an amendment to this ATMP, additional environmental review, and/or the issuance of new or revised OpSpecs. If updated OpSpecs are required, they will be issued within 90 days.

8.0 ADAPTIVE MANAGEMENT

Adaptive management allows for minor modifications to this ATMP without a formal ATMP amendment if the impacts of such changes are within the impacts already

analyzed by the agencies under the National Environmental Policy Act, the National Historic Preservation Act, and the Endangered Species Act. Adjustments to the number of commercial air tours allocated to individual operators as a result of the competitive bidding process and minor changes to routes, altitudes, or other operating parameters are examples of adaptive management measures that may not require a formal ATMP Amendment. Such modifications may be made if: 1) the NPS determines that they are necessary to avoid adverse impacts to Park resources, values, or visitor experiences; 2) the FAA determines the need for such changes due to safety concerns; or 3) the agencies determine that appropriate, minor changes to this ATMP are necessary to address new information (including information received through tribal input and/or consultation) or changed circumstances.

9.0 AMENDMENT

This ATMP may be amended at any time: if the NPS, by notification to the FAA and the operators, determines that the ATMP is not adequately protecting Park resources and/or visitor enjoyment; if the FAA, by notification to the NPS and the operators, determines that the ATMP is adversely affecting aviation safety and/or the national aviation system; or, if the agencies determine that appropriate changes to this ATMP are necessary to address new information or changed circumstances that cannot be addressed through adaptive management.

The FAA and the NPS will jointly consider requests to amend this ATMP from interested parties. Requests must be made in writing and submitted to both the FAA and the NPS. Requests must also include justification that includes information regarding how the requested amendment: is consistent with the objectives of this ATMP with respect to protecting Park resources, tribal lands, or visitor use and enjoyment; and would not adversely affect aviation safety or the national aviation system. The FAA and the NPS will publish additional information for interested parties about the form and manner for submitting a request.

Increases to the total number of air tours authorized per year under this ATMP resulting from accommodation of a new entrant application or a request by an existing operator will require an amendment to this ATMP and additional environmental review.

Notice of all amendments to this ATMP will be published in the Federal Register for notice and comment.

10.0 CONFORMANCE OF OPERATIONS SPECIFICATIONS

New OpSpecs that incorporate the operating parameters set forth in this ATMP will be issued within 90 days of the date of signature on this ATMP.

11.0 EFFECTIVE DATE

This ATMP is effective on the date new OpSpecs incorporating its operating parameters are issued.

<hr/> Alan Sumeriski Deputy Superintendent <i>for Superintendent Cassius Cash</i> Great Smoky Mountains National Park National Park Service	Date	<hr/> Michael C. O’Harra Regional Administrator Southern Region Federal Aviation Administration	Date
<hr/> Mark A. Foust Regional Director Interior Region 2: South Atlantic-Gulf National Park Service	Date	<hr/> Kevin Welsh Executive Director Office of Environment & Energy Federal Aviation Administration	Date
<hr/> Raymond M. Sauvajot Associate Director Natural Resource Stewardship and Science Directorate National Park Service	Date		

APPENDIX A

1.0 COMMERCIAL AIR TOUR ALLOCATIONS

Table 1 provides allocations of the operations authorized per year along with authorized aircraft type by operator. IOA previously issued for the Park and Cherokee tribal lands terminates on the effective date of this ATMP.

Table 1. Air Tour Operations and Aircraft Type by Operator

Air Tour Operator	Annual Operations	Daily Operations	Aircraft Type
Whirl'd Helicopters, Inc.	864 tours Annual limit of 26 flights on the Black Route (SGTF) and 17 flights on the Blue Route (SMSF)	4 tours on Standard Days, with 40 Flex Days per year on which up to 5 tours are allowed	BHT-206-B, BHT-206-L1, BHT-206-L3, R-44-44, R-44-II, R-44-RavenII
Great Smoky Mountain Helicopter Inc. (Smoky Mountain Helicopters, M Helicopters of TN, Delta Helicopters, Cherokee Helicopters)	82 tours	1 tour on Standard Days, with 40 Flex Days per year on which up to 2 tours are allowed	BHT-206-B

2.0 DAY/TIME RESTRICTIONS

Table 2 lists the time-of-day and day-of-week operating parameters.

Table 2. Air Tour Time-of-Day and Day-of-Week Restrictions by Operator

Air Tour Operator	Time-of-Day	Day-of-Week
Whirl'd Helicopters, Inc.	Two hours after sunrise until two hours before sunset	The NPS can establish temporary no-fly periods that apply to air tours for special events or planned Park management.
Great Smoky Mountain Helicopter Inc. (Smoky Mountain Helicopters, M Helicopters of TN, Delta Helicopters, Cherokee Helicopters)	Two hours after sunrise until two hours before sunset	The NPS can establish temporary no-fly periods that apply to air tours for special events or planned Park management.

Table 3 lists the standard day and flex day restrictions by operator.

Table 3. Air Tour Standard Day and Flex Day Restrictions by Operator

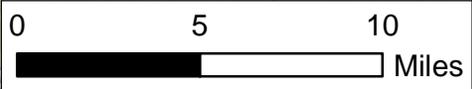
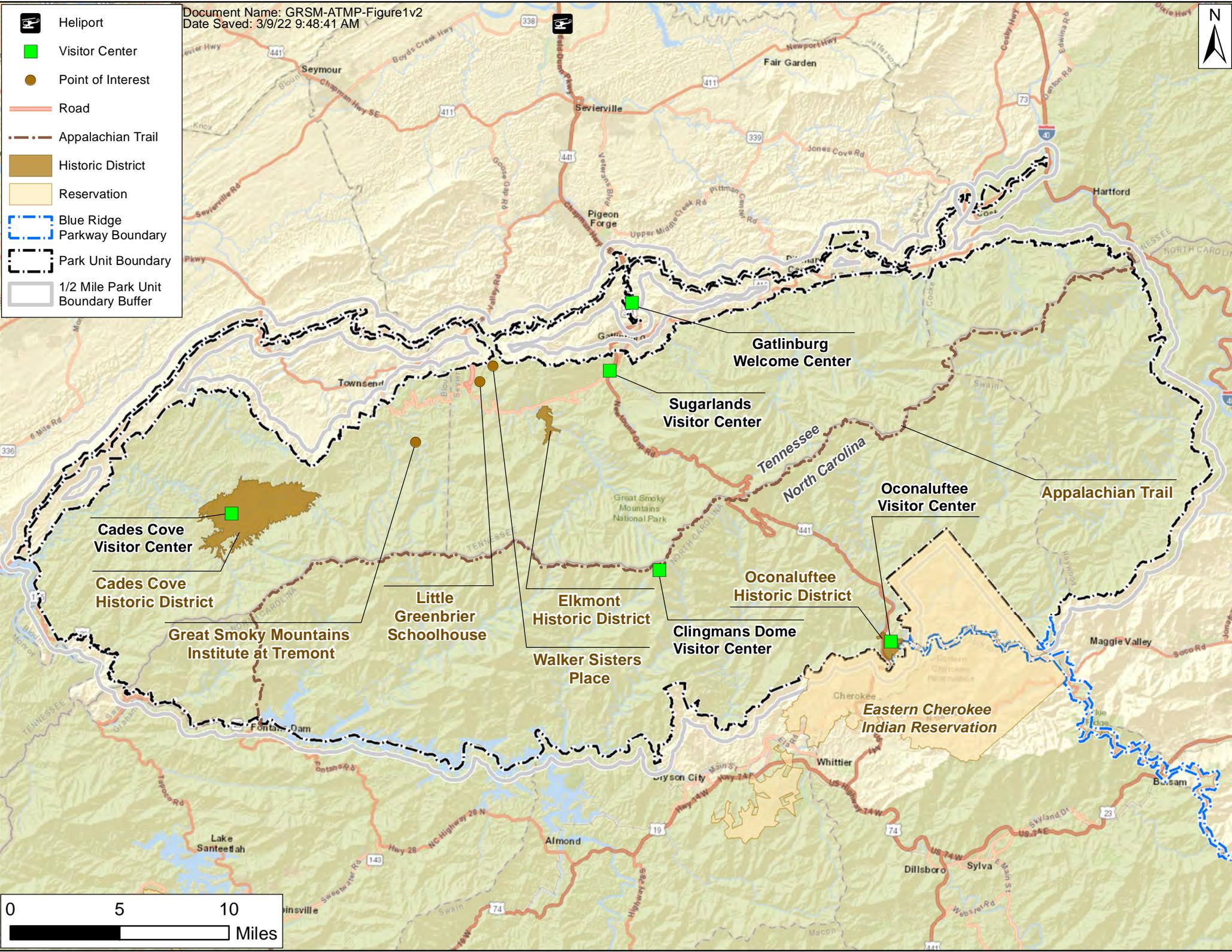
Air Tour Operator	Standard Day Flight Limit	Maximum Number of Standard Days	Flex Day Flight Limit	Maximum Number of Flex Days
Whirl'd Helicopters, Inc.	4	Unrestricted	5	40
Great Smoky Mountain Helicopter Inc. (Smoky Mountain Helicopters, M Helicopters of TN, Delta Helicopters, Cherokee Helicopters)	1	Unrestricted	2	40

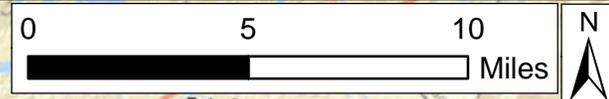
APPENDIX B

Enlarged Figures 1 and 2

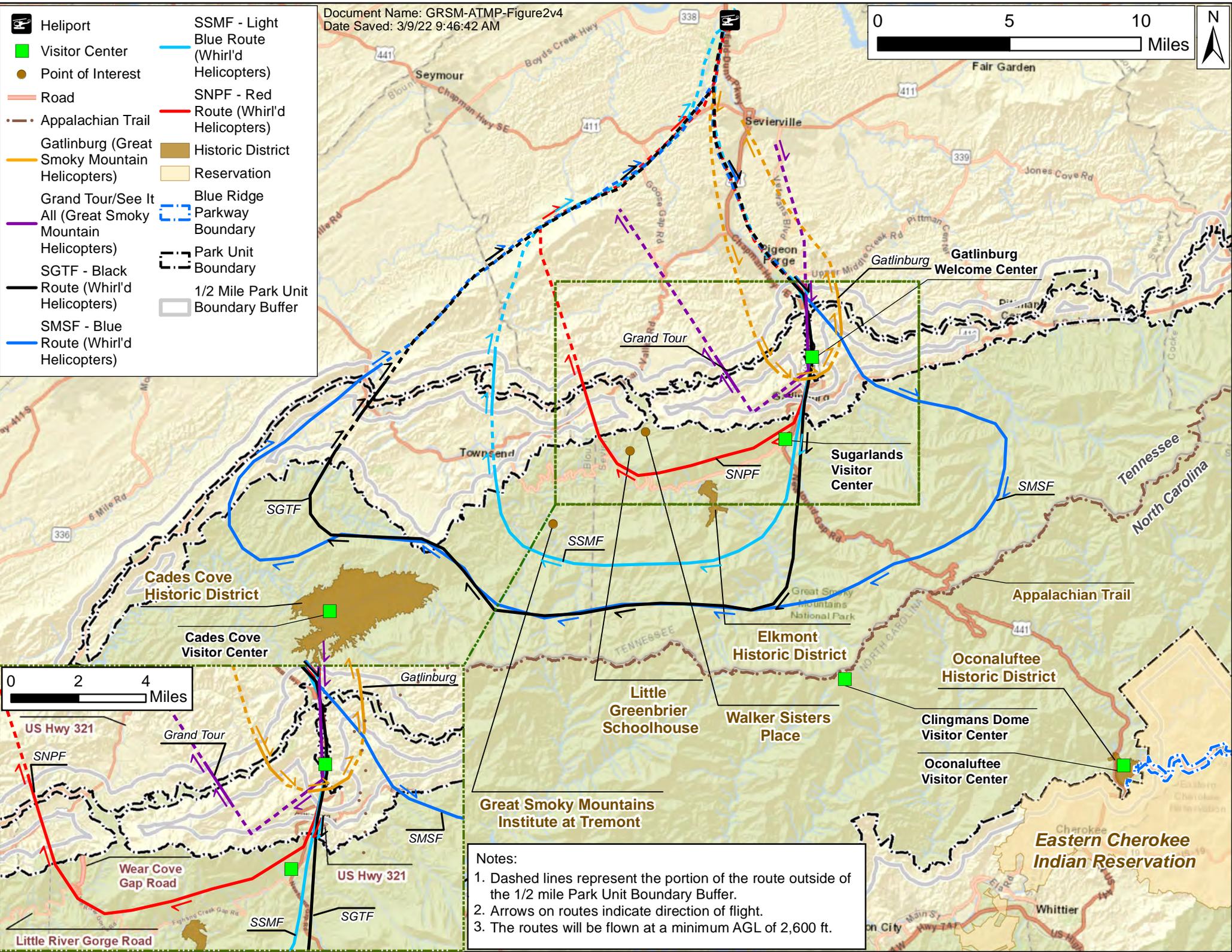


- Heliport
- Visitor Center
- Point of Interest
- Road
- Appalachian Trail
- Historic District
- Reservation
- Blue Ridge Parkway Boundary
- Park Unit Boundary
- 1/2 Mile Park Unit Boundary Buffer





- | | |
|--|---|
| Heliport | SSMF - Light Blue Route (Whirl'd Helicopters) |
| Visitor Center | SNPF - Red Route (Whirl'd Helicopters) |
| Point of Interest | Historic District |
| Road | Reservation |
| Appalachian Trail | Blue Ridge Parkway Boundary |
| Gatlinburg (Great Smoky Mountain Helicopters) | Park Unit Boundary |
| Grand Tour/See It All (Great Smoky Mountain Helicopters) | 1/2 Mile Park Unit Boundary Buffer |
| SGTF - Black Route (Whirl'd Helicopters) | |
| SMSF - Blue Route (Whirl'd Helicopters) | |



Notes:

1. Dashed lines represent the portion of the route outside of the 1/2 mile Park Unit Boundary Buffer.
2. Arrows on routes indicate direction of flight.
3. The routes will be flown at a minimum AGL of 2,600 ft.

APPENDIX B

Environmental Screening Form



ENVIRONMENTAL SCREENING FORM (ESF)

PROJECT INFORMATION

Project Title: Great Smoky Mountains National Park Air Tour Management Plan

PEPC Project Number: 100689

Project Type: Categorical Exclusion

Project Location: Sevier County, Blount County, and Cocke County, TN and Swain County and Haywood County, NC

PROJECT DESCRIPTION

The proposed action is to implement an Air Tour Management Plan (ATMP) for Great Smoky Mountains National Park (the Park). The “Project Description” section of the Categorical Exclusion (CE) Form for the ATMP sets out the elements of the ATMP and is incorporated herein by reference.

RESOURCE IMPACTS TO CONSIDER

Definition of Effects or Impacts (40 C.F.R. § 1508.1(g))

Effects or impacts means changes to the human environment from the proposed action or alternatives that are reasonably foreseeable and include direct effects, indirect effects, and cumulative effects. Effects include ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effects will be beneficial.

For the purposes of considering environmental impacts, the National Park Service (NPS) evaluated the change to the human environment resulting from implementation of the ATMP. Consistent with Council on Environmental Quality regulations, the baseline from which to measure environmental impacts of the ATMP is the current condition of the human environment. In this case, the baseline is the current condition of Park resources and values, as impacted by 946 commercial air tours per year (existing three-year average of tours conducted on an annual basis from 2017-2019) along with other planned actions and trends. The baseline also includes the route and altitude information of commercial air tours provided by the operators, as well as the timing and daily commercial air tour information from commercial air tour reports provided by the operators from 2017-2019.

Existing Conditions of Commercial Air Tours over the Park

Two commercial air tour operators, Great Smoky Mountain Helicopters Inc. and Whirl'd Helicopters, Inc., hold IOA to conduct a combined total of 1,920 commercial air tours over the Park each year.¹ Based on the three-year average of reporting data from 2017 to 2019, the operators conduct an average of 946 commercial air tours over the Park each year. Great Smoky Mountain Helicopters Inc. conducts an average of 82 commercial air tours over the Park each year², though these tours only fly over the Foothills Parkway area and do not fly over the remainder of the Park, and Whirl'd Helicopters, Inc. conducts an average of 864 commercial air tours over the Park each year. The operators conduct commercial air tours on six different routes within the Park. Whirl'd Helicopters, Inc. conducts commercial air tours on four different routes using BHT-206-B, BHT-206-L1, BHT-206-L3, R-44-44, R-44-II, and R-44-RavenII aircraft (rotorcraft) and Great Smoky Mountain Helicopter, Inc. conducts commercial air tours on two different routes using BHT-206-B aircraft (rotorcraft). All routes are flown by both operators at altitudes between 1,000 feet (ft.) and 1,500 ft. above ground level (AGL). Existing conditions of commercial air tours over the Park are depicted in Figure 1 below.

¹ Notice of Interim Operating Authority Granted to Commercial Air Tour Operators Over National Parks and Tribal Lands Within or Abutting National Parks, 70 Fed. Reg. 36,456 (June 23, 2005).

² In the process of developing the ATMP, the FAA and the NPS reached out to both operators for commercial air tour route information. During this process, the FAA and the NPS identified discrepancies between the route information and reporting information provided by Great Smoky Mountain Helicopter, Inc. The operator was confused as to whether commercial air tours that only flew over the Foothills Parkway or that flew outside the Park but within ½ mile of its boundary were considered commercial air tours over the Park and were thus required to be reported under NPATMA. The agencies determined that the routes that Great Smoky Mountain Helicopter, Inc. provided were in fact commercial air tours as defined by NPATMA and should have been reported as such. The agencies estimate, based upon conversations with the operator, that on average, the operator conducted 82 commercial air tours over the Foothills Parkway area of the Park annually from 2017-2019.

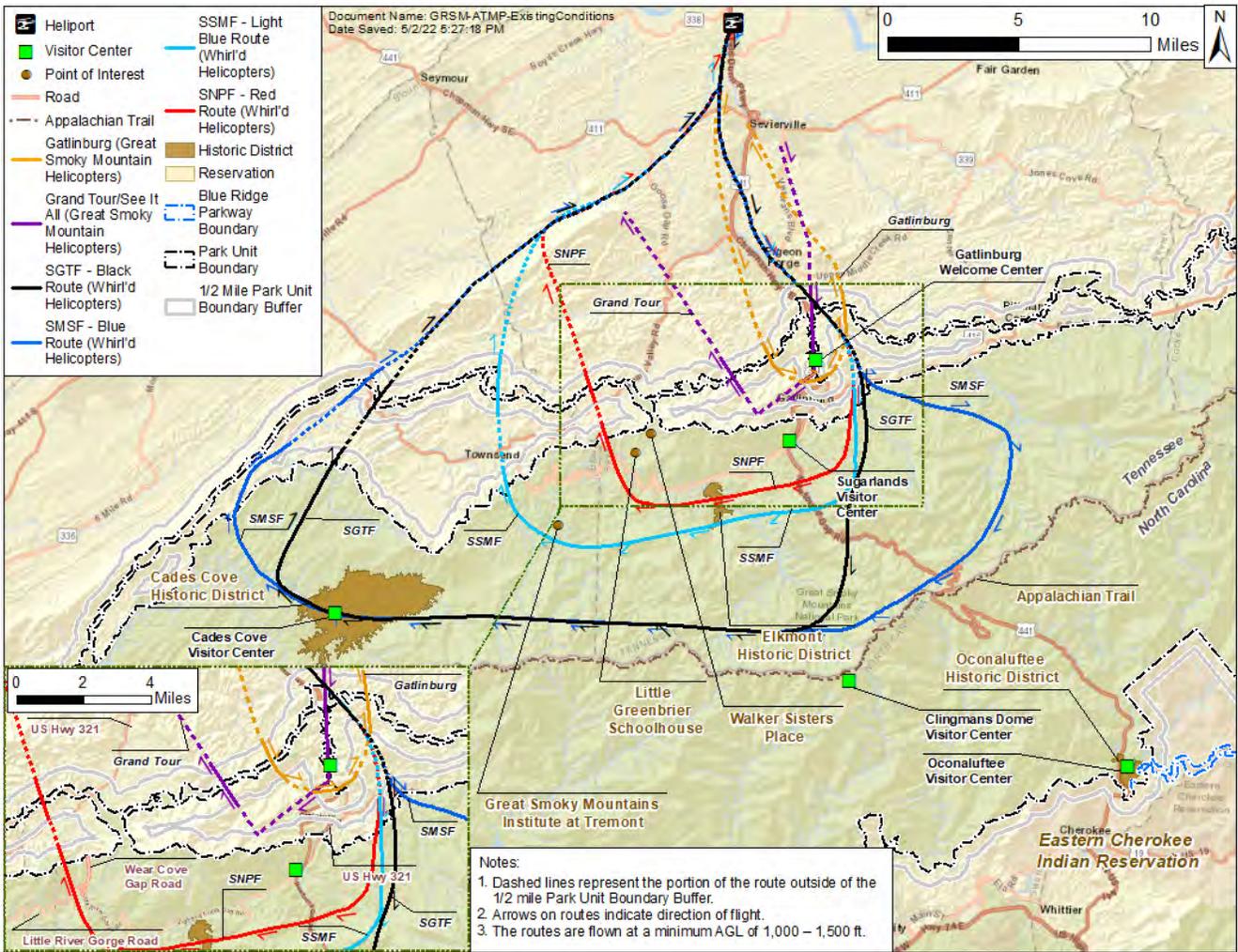


Figure 1. Existing conditions of commercial air tours over the Park

Summary of the ATMP

The ATMP limits the annual number of commercial air tours that the operators are authorized to conduct over the Park or within ½ mile of its boundary to the existing three-year average of tours conducted on an annual basis from 2017-2019 (946 tours per year). The operators will be allowed to conduct commercial air tours on the existing routes that each operator currently reports flying over the Park, with the modifications described in Section 3.2 of the ATMP, “Commercial Air Tours Routes and Altitudes.” The ATMP authorizes up to 26 flights per year on the Black Route (SGTF) and up to 17 flights per year on the Blue Route (SMSF), and restricts the daily number of commercial air tours that each operator may conduct in the form of Standard Days and Flex Days. The ATMP increases the minimum altitude that aircraft may fly over the Park, from a minimum of 1,000-1,500 ft. AGL to a minimum of 2,600 ft. AGL and prohibits aircraft from hovering or looping while conducting commercial air tours over the Park. Commercial air tours using aircraft that do not qualify for the quiet technology incentive may begin two hours after sunrise and must end at least two hours before sunset. The ATMP allows the Park to establish no-fly periods for special events or planned Park management. *See* the ATMP for the Park for more information.

EVALUATION OF THE ATMP

Table 1. Potential Issues and Impacts to Resources

Resource	Potential Issues & Impacts
Air Air Quality	The findings from the screening analysis demonstrate that implementing the ATMP will not meaningfully impact (meaning that it will have no or minimal impact) local air quality and will not have regional impacts. See <i>Air Quality Technical Analysis</i> below.
Biological Species of Special Concern or Their Habitat	<p><u>Federally Listed Threatened and Endangered Species</u></p> <p>The agencies specifically analyzed potential impacts to Carolina northern flying squirrel (<i>Glaucomys sabrinus coloratus</i>) (endangered), northern long-eared bat (<i>Myotis septentrionalis</i>) (threatened), Indiana bat (<i>Myotis sodalis</i>) (endangered), tri-colored bat (<i>Perimyotis subflavus</i>) (under review), and little brown bat (<i>Myotis lucifugus</i>) (under review). The Section 7 analysis conducted by the agencies considered the potential effects of the ATMP on listed species and/or designated critical habitat without the consequences to those listed species by the existing commercial air tours, in accordance with 50 CFR § 402.02. The NPS conducted informal consultation with the U.S. Fish and Wildlife Service (USFWS) in accordance with Section 7 of the Endangered Species Act. Based on this consultation, the agencies have determined the ATMP <i>may affect, not likely to adversely affect</i> Carolina northern flying squirrel, northern long-eared bat, Indiana bat, tri-colored bat, and little brown bat. The USFWS concurred with this determination on April 27, 2022. See the Appendix E in the Record of Decision, which includes the agencies’ analysis.</p> <p><u>Special Status Species and Migratory Birds</u></p> <p>Bald eagles, golden eagles, and peregrine falcons are protected raptor species that are present at the Park.^{3,4} These species can be sensitive to low flying aircraft and their associated noise under certain conditions. Nesting eagles that are repeatedly disturbed by noise may abandon their nests. Additionally, raptors may collide with aircraft because of the altitude at which raptors fly. Refer to the Section 7 documentation for more information. Scientific and national level guidance recommends aircraft standoff of 1,000 ft. for bald eagles (USFWS, 2007) and golden eagles to reduce noise impacts (Richardson and Miller, 1997) and 2,600 ft. for peregrine falcons to prevent both collisions as well as noise impacts.⁵ When compared to current conditions, the ATMP authorizes the same number of flights on substantially the same routes and sets the minimum altitude at 2,600 ft. AGL for commercial air tours. Therefore, the ATMP is expected to have limited to no impacts or only beneficial impacts on these species when compared to current conditions. The condition that commercial air tours will fly no lower than 2,600 ft. AGL complies with guidance for raptor protection including threatened, endangered and migratory birds (Romin and Muck, 2002).</p>

³ Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act.

⁴ The peregrine falcon is protected under the Migratory Bird Treaty Act. The peregrine falcon is a state-listed species in both North Carolina and Tennessee as an endangered species.

⁵ Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors (2020). Colorado Division of Wildlife.

	<p>A number of other migratory birds⁶ and other avian species use the Park. Information related to migratory birds are summarized more generally below under wildlife. Migratory birds will be exposed to noise at a similar or decreased level compared to what is currently occurring because the number of authorized flights under the ATMP will be the same as the average number of flights from 2017-2019 on substantially the same routes. Therefore, the ATMP is expected to have negligible or only beneficial impacts on these species when compared to current conditions.</p>
<p>Biological Wildlife and/or Wildlife Habitat including terrestrial and aquatic species</p>	<p>The Park is home to 65 species of mammals, over 200 species of birds, 67 native fish species, and more than 80 types of reptiles and amphibians. Over 200 species of birds are regularly sighted in the Park, and 85 of those migrate from the neotropics. Some 120 species nest here.⁷</p> <p>Noise from commercial air tours may impact wildlife in a number of ways: altered vocal behavior, breeding relocation, changes in vigilance and foraging behavior, and impacts on individual fitness and the structure of ecological communities to name a few (Shannon et al., 2016; Kunc et al., 2016; Kunc and Schmidt, 2019). Understanding the relationships between commercial air tour noise attributes (e.g., timing, intensity, duration, and location) and ecosystem responses is essential for understanding impacts to these species and developing management actions to address them (Gutzwiller et al., 2017).</p> <p>Since the ATMP authorizes a maximum number of commercial air tours equivalent to the three-year average from 2017-2019 (946 flights per year) on substantially the same routes, it is anticipated that there will be little to no change to existing operating conditions and the resultant disturbances to wildlife. The ATMP’s maximum daily limit of seven flights on Flex Days, with most days experiencing no more than five commercial air tours due to Standard Day limit of five tours per day, as well as annual caps, will reduce daily noise impacts to wildlife as compared to current conditions. Furthermore, the ATMP requires the operators to fly at increased altitudes that are flown under existing conditions (minimum 2,600 ft. AGL). This limits noise exposure to wildlife in the Park and will result in a beneficial impact compared to current conditions. It should be noted that when the altitude of an aircraft is increased, the total area exposed to the noise from that aircraft may also increase depending on the surrounding terrain. Although the area exposed to noise might increase, this would not meaningfully affect wildlife because of the attenuation of the noise from higher altitude and transient nature of the impacts. Many species of wildlife move, making daily maximum exposure less likely. Collectively, these changes from existing operations and their effect on the current condition for wildlife will result in beneficial impacts for wildlife at the Park.</p> <p>Sunrise and sunset are important times of the day for wildlife. Biologically important behaviors for many species occur during these times, such as the dawn chorus for songbirds, foraging, and communication. The day/time restrictions and quiet technology incentives included in the ATMP provide protection to wildlife that are active during sunrise and sunset, which represents an improvement to current conditions. In the event that operators request and are authorized to use the quiet technology incentive, those tours would result in the possibility of noise during the sunrise/sunset time periods. The</p>

⁶ Migratory bird species are protected under the Migratory Bird Treaty Act.

⁷ See <https://www.nps.gov/grsm/learn/nature/animals.htm>.

	<p>impacts from these flights would be less than the noise modeled in the <i>Noise Technical Analysis</i> but could be more than when there are no flights during this time of day.</p> <p>In conclusion, while wildlife will continue to be exposed to noise, effects are expected to be insignificant and will not be widespread throughout the Park. Any disturbances will likely be temporary in nature and infrequent on both a daily and annual basis. Noise from commercial air tours will be experienced by only those wildlife under or near the designated routes, leaving most wildlife in the Park unaffected. The level of noise exposure will be similar or decrease compared to current conditions because the number of authorized flights under the ATMP will be the same as the average number of flights from 2017-2019 on the on substantially the same routes. Therefore, impacts to wildlife are not significant, and because altitudes will increase when compared to existing flight operations and the daily number of flights will be limited, new impacts from the ATMP are expected to be beneficial for these species when compared to current conditions. <i>See also the discussion above for special status species.</i></p>
<p>Cultural Cultural Landscapes</p>	<p>The NPS defines a Cultural Landscape as: a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values. There are four general kinds of cultural landscape, not mutually exclusive: historic sites, historic designed landscapes, historic vernacular landscapes, and ethnographic landscapes (National Park Service, 2002).</p> <p>An impact to a cultural landscape will occur if the project alters any of the characteristics that help make the cultural landscape eligible for listing the National Register of Historic Places (NRHP). This includes any diminishment of the cultural landscape’s integrity of location, design, setting, materials, workmanship, feeling, or association. The potential impacts to cultural landscapes from the ATMP are limited to the continuation of visual and audible elements that diminish the integrity of the landscape setting and/or feeling.</p> <p>Cades Cove Historic District and the Voorheis Estate are historic properties within the Park that have been identified and evaluated within the context of cultural landscapes and are considered eligible for listing on the NRHP. Cultural landscape inventories are underway or pending for the Chimney’s picnic area and Elkmont Campground. The number of authorized flights under the ATMP will be the same as the average number of flights from 2017-2019 on the on substantially the same routes. These intrusions will be of limited frequency and duration, consisting of no more than seven flights daily. On days when commercial air tours occur, noise levels above 35 dBA may approach 35 minutes in the area near Gatlinburg and be noticeable for less time at other locations which are beneath and adjacent to the routes (<i>see Figure 2</i>). <i>See Noise Technical Analysis</i> below. Therefore, impacts to cultural landscapes will be similar or decrease compared to impacts currently occurring because the number of authorized flights under the ATMP will be the same as the average number of flights from 2017-2019.</p> <p>The Federal Aviation Administration (FAA), in coordination with the NPS, consulted with the Tennessee and North Carolina State Historic Preservation Offices, Native American tribes, and other consulting parties on the potential impacts of the ATMP on Historic Properties, including cultural landscapes as part of Section 106 consultation. That consultation process led to a finding that the ATMP will have no adverse effect on historic properties.</p>

	<p>The FAA proposed this finding to all consulting parties. The North Carolina SHPO concurred with the finding; however, the Tennessee SHPO objected to the finding. FAA requested that the Advisory Council on Historic Preservation (Council) review its finding. The Council issued an advisory opinion finding that the FAA appropriately applied the Criteria of Adverse Effect and provided recommendations. The FAA detailed in their response to the Council’s advisory opinion how the agencies have taken the Council’s recommendations into account and notified consulting parties of the outcome of the Section 106 process. <i>See</i> Appendix F of the Record of Decision.</p>
<p>Cultural Ethnographic Resources</p>	<p>The NPS defines Ethnographic Resources as: a site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it (NPS, 2002). Ethnographic resources include Traditional Cultural Properties (TCPs) (NPS, 1992).</p> <p>An impact to an Ethnographic Resource will occur if the project affects those elements of the resources that make it significant to the group traditionally associated with the resource, or if the project interferes with the use of the resource by the associated groups.</p> <p>Multiple tribes (<i>see</i> Appendix F of the Record of Decision) attach religious or cultural significance to areas within and adjacent to the Park, among them the Alabama-Coushatta Tribe of Texas, Catawba Indian Nation, Coushatta Tribe of Louisiana, Eastern Band of Cherokee Indians, Cherokee Nation, Muscogee Creek Nation, United Keetoowah Band of Cherokee Indians in Oklahoma, and Chickasaw Nation. Multiple tribes have informed Park staff that there are sites within the Park that are significant to them. The ATMP includes provisions that allow for the establishment of no-fly periods. These no-fly periods may be established to avoid conflicts or impacts to tribal ceremonies or similar activities, therefore no impacts on ethnographic resources are anticipated. Sacred ceremonies or other tribal activities which occur without notice to the NPS may be interrupted by noise, however, commercial air tours have no effect on tribal access.</p> <p>The FAA, in coordination with the NPS, consulted with the tribes listed above on the potential impacts of the ATMP on Ethnographic Resources, through compliance with Section 106 of the National Historic Preservation Act. That consultation led to a finding that the ATMP will have no adverse effect on historic properties, which includes Ethnographic Resources. As explained above, the FAA proposed a finding of no adverse effect to all consulting parties. The Council reviewed the finding following an objection by the Tennessee SHPO, and ultimately the finding was upheld.</p>
<p>Cultural Prehistoric/historic structures and archeological resources</p>	<p>Cultural resources within the Park include a number of archeological sites and historic structures. The Park holds one of the best collections of log buildings in the eastern United States. Over 90 historic structures—houses, barns, outbuildings, churches, schools, and grist mills—have been preserved or rehabilitated in the Park. The best places to see them are at Cades Cove, Oconaluftee, and along the Roaring Fork Motor Nature Trail. As noted above, impacts to these resources will occur if the ATMP alters the characteristics of an archeological site or historic structure that make it eligible for NRHP listing. Commercial air tours, by their nature, have the potential to impact resources for which only feeling and setting are the contributing elements. Feeling and setting have been identified as contributing elements for 15 cultural resources within the</p>

	<p>Area of Potential Effect (APE) (<i>see</i> Appendix F of the Record of Decision for a complete list).</p> <p>Commercial air tours will result in the continuation of visual and audible elements that are inconsistent with the feeling and setting for these resources. These intrusions will be limited to a maximum of 946 instances per year, and of limited duration. The <i>Noise Technical Analysis</i> shows that aircraft noise related to commercial air tours are predicted to be greater than 35 dBA for less than 35 minutes a day (<i>see</i> Figure 2). These impacts will be similar to or decrease compared to impacts currently occurring because the number of authorized flights under the ATMP will be the same as the average number of flights from 2017-2019, and the on substantially the same routes.</p> <p>The commercial air tour routes in the ATMP also include a standoff distance to protect Roaring Fork Historic District, Voorheis Estate Historic District, Junglebrook Historic District /Noah Bud Ogle Farm, Elkmont Historic District, Cades Cove Historic District, Walker Sisters Place, and Little Greenbrier Schoolhouse. The daily caps of five tours per day for Standard Days and seven tours for Flex Days will limit the number of noise events per day at these sites. Collectively, these changes represent an improvement to current conditions for cultural resources.</p> <p>The FAA, in coordination with the NPS, consulted with the Tennessee and North Carolina State Historic Preservation Offices, Native American tribes, and other consulting parties on the potential impacts of the ATMP on Historic Properties, including Cultural prehistoric/historic structures as part of Section 106 consultation. That consultation process led to a finding that the ATMP will have no adverse effect on historic properties. As explained above, the FAA proposed a finding of no adverse effect to all consulting parties. The Council reviewed the finding following an objection by the Tennessee SHPO, and ultimately the finding was upheld.</p>
<p>Cultural Tribal Lands</p>	<p>NPATMA provides that ATMPs address impacts of commercial air tours on tribal lands that are within the Park or outside the Park and within ½-mile of its boundary. The Eastern Cherokee Indian Reservation is adjacent to the Park in North Carolina and thus tribal lands of the Eastern Band of Cherokee Indians are located outside the Park but within ½ mile of its boundary. None of the existing commercial air tour routes fly over these lands and none of the commercial air tour routes authorized by the ATMP fly over these lands. While sound does travel over distances, given the location of the commercial air tour routes authorized under the ATMP coupled with the altitude at which the aircraft will be flying, and the various factors that influence how far a sound travels before being absorbed into the atmosphere, NPS has determined that no impacts to tribal lands will result from the commercial air tours authorized under the ATMP. Figure 1 in the CE form depicts the location of the Eastern Cherokee Indian Reservation in relation to the Park.</p>
<p>Lightscaapes</p>	<p>Under the ATMP, unless they qualify for the quiet technology incentive, commercial air tours are not permitted before within two hours before sunset and two hours after sunrise, or before sunrise and after sunset for operators that have requested and are authorized to use the quiet technology incentive. Any lights from commercial air tour aircraft are not likely to be noticeable and any impacts will be similar to or decrease compared to current conditions because the number of authorized flights under the ATMP will be the same as the average number of flights from 2017-2019 and will utilize substantially the same routes. Therefore, impacts to lightscaapes will not be significant.</p>

<p>Other Human Health and Safety</p>	<p>Commercial air tours are subject to the FAA regulations for protecting individuals and property on the ground, and preventing collisions between aircraft, land or water vehicles, and airborne objects. The operators must continue to meet the FAA safety regulations.</p>
<p>Socioeconomic Minority and low-income populations, size, migration patterns, etc.</p>	<p>U.S. Census data (United States Census Bureau, 2021) for census blocks surrounding the Park was reviewed to determine the presence of minority or low-income populations immediately outside and within ½-mile of the Park boundary. Based on this review, no minority or low-income populations were identified in Swain, Haywood, Sevier, Blount, or Cocke Counties. Therefore, the ATMP will not have a disproportionate impact on low-income or minority populations.</p>
<p>Socioeconomic Socioeconomic</p>	<p>Commercial air tours generate income for operators and potentially generate income for other ancillary visitor industry businesses. Visitors from outside the immediate area contribute to this income. Because the number of commercial air tours authorized under the ATMP is the same as the average number of flights from 2017-2019 on substantially the same routes, the Park does not expect visitor spending on commercial air tours or economic activity in the local communities to change. The competitive bidding process may redistribute the number of flights and income between individual operators in the future but is not anticipated to affect the overall average number of flights or local business activity generated by these flights.</p> <p>The agencies acknowledge that the limited number of flights permitted by the ATMP could limit the potential future economic growth for commercial air tour operators that fly over the Park. Whirl'd Helicopters commented that in 2020 it flew a significant number of additional commercial air tours over the three-year average, and therefore the ATMP would have a significant adverse effect on their income. The agencies acknowledge that commercial air tour numbers change year to year and in some years operators may have flown more or less tours than the average. The agencies chose the three-year average as the baseline for measuring the impact of the change because it accounted for variations between years, included reporting data that had been verified, was the three-year average at the initiation of the planning period, and avoided years where tour numbers were potentially impacted by COVID-19. At some parks, commercial air tour numbers declined in 2020 while at a few others they increased. It is unclear whether the increase in commercial air tours reported at the Park will be a continuing trend. Therefore, the agencies believe the three-year average from 2017-2019 is the appropriate baseline from which to determine the impact of the ATMP. The operators likely previously experienced variation in income from commercial air tours over the Park between years. In some years operators generated more income and in other years less income, depending on demand. This would continue to be the case under the ATMP. Finally, since the ATMP does not limit commercial air tour opportunities more than ½ mile outside the Park's boundary, and there are ample opportunities for commercial air tours outside of this area, the opportunity for generating income from commercial air tours is not lost even when considering a change from the 2020 unverified numbers (<i>see other routes the operator currently flies outside the ATMP boundary here: https://scenichelicoptertours.com/pigeon-forge-and-gatlinburg/</i>). The operators will only be limited from generating income from routes over the Park and within ½-mile of its boundary, not those beyond that area. Therefore, significant socioeconomic impacts are not anticipated to occur as a result of the ATMP.</p>
<p>Soundscapes Acoustic Environment</p>	<p>Baseline acoustic conditions in the Park were measured in 2005 and 2006 (Lee et al., 2016) and also in 2016 (Carpenter and Becco, 2021). At the locations nearest commercial air tour routes, the existing ambient daytime sound level was reported to be 31-36 decibels in 2005 and 2006 and 27-33 decibels in 2016, while the natural ambient</p>

	<p>daytime sound level was reported to be 21-32 decibels in 2005 and 2006 and 25-28 decibels in 2016. The existing ambient condition includes all sound associated with a given environment, i.e., natural, human, and mechanical sounds, such as automobiles and aircraft. Aircraft sound measured at a sampling location may include general aviation, commercial jets, military, and air tours. The natural ambient is the sound conditions found in a study area, including all sounds of nature (i.e., wind, water, wildlife, etc.) and excluding all human and mechanical sounds. Both the existing and natural ambient conditions were considered in the resource impacts analysis.</p> <p>Depending on a receiver’s location on the ground in relation to an aircraft flying overhead, aircraft sound can range from faint and infrequent to loud and intrusive. Impacts of aircraft noise range from masking quieter sounds of nature such as bird vocalizations to noise loud enough to interrupt conversational speech between visitors. To capture how noise may affect quieter natural sounds or conversations, the resource impacts analysis below examines the time above 35 decibels (for quieter natural sounds and impacts to natural resources) and time above 52 decibels for conversational speech disturbance and impacts to visitor experience.</p> <p>Overall, noise impacts associated with commercial air tours over the Park are not expected to measurably change, since the ATMP authorizes the same number of flights per year as the average number of flights from 2017-2019 on the on substantially the same routes, and requires commercial air tours to fly at increased altitudes as compared to those flown under existing conditions. The increase of 1,100 to 1,600 ft. (from minimum 1,000 to 1,500 ft. AGL under existing conditions to 2,600 ft. AGL under the ATMP) will reduce the maximum noise levels at sites directly below the commercial air tour routes. It should be noted that when the altitude of an aircraft is increased, the total area exposed to the noise from that aircraft may also increase depending on the surrounding terrain. Although the area exposed to noise might increase, this would not meaningfully affect the acoustic environment because of the attenuation of the noise from higher altitude and transient nature of the impacts.</p> <p>For purposes of assessing noise impacts from commercial air tours on the acoustic environment of the Park under the National Environmental Policy Act (NEPA), the FAA noise evaluation is based on Yearly⁸ Day Night Average Sound Level (DNL); the cumulative noise energy exposure from aircraft over 24 hours. The DNL analysis indicates that the ATMP would not result in any noise impacts that would be “significant” or “reportable” under FAA’s policy for NEPA. Refer to the <i>Noise Technical Analysis</i> below.</p>
<p>Viewsheds Viewsheds</p>	<p>While studies indicate that aircraft noise in national parks can impact human perceptions of aesthetic quality of viewsheds (Weinzimmer et al., 2014; Benfield et al., 2018), because the level of commercial air tour activity under the ATMP will remain the same, there will be no change in the effect to visitors in this regard. Other literature for studies on impacts from commercial air tours or overflights generally on viewsheds conclude that the visual impacts of overflights are difficult to identify because visitors primarily notice aircraft because of the accompanying noise. Aircraft are transitory elements in a</p>

⁸ As required by FAA policy, the FAA typically represents yearly conditions as the Average Annual Day (AAD). However, because ATMP operations in the park occur at low annual operational levels and are highly seasonal in nature it was determined that a peak day representation of the operations would more adequately allow for disclosure of any potential impacts. A peak day has therefore been used as a conservative representation of assessment of AAD conditions.

	<p>scene and visual impacts tend to be relatively short. The short duration and low number of flights (along with the position in the scene as viewed from most locations) make it unlikely the typical visitor will notice or be visually distracted by aircraft. The viewer's eye is often drawn to the horizon to take in a park view and aircraft at higher altitudes are less likely to be noticed. Aircraft at lower altitudes may attract visual attention but are also more likely to be screened by vegetation or topography.</p> <p>The Park includes numerous outstanding viewsheds, including those from the Appalachian National Scenic Trail (Appalachian Trail) a segment of which is within the Park boundary. The Appalachian Trail is nationally significant under § 110 of the National Historic Preservation Act (NHPA) for its views, among other factors. Section 110 of the NHPA requires full consideration of a range of effects on these properties, including visual, audible and atmospheric (§ 110(a)(2)(B), (C), and (E) and § 402). Under the ATMP, commercial air tours will be prohibited within ½-mile of the Appalachian Trail. This prohibition helps preserve the scenic values of the trail, values which contribute to the trail's national significance. Aircraft may still be seen from the trail, but it is unlikely aircraft noise will be disruptive from most locations along the trail making the aircraft less noticeable. With the required ½-mile standoff distance, and the required 2,600 ft. AGL requirement, it is anticipated that the A-weighted maximum sound level (L_{Amax}, dB) will not exceed 50 dBA for greater than five minutes in any areas of the Park, including those near the Appalachian Trail. <i>See Noise Technical Analysis</i> below. Further, only the Black and Blue routes approach the area near the Appalachian Trail, and these routes are limited to 26 and 17 flights per year, respectively.</p> <p>Under existing conditions, commercial air tours over the Park are flown on six different routes. The ATMP limits the number of commercial air tours to 946 tours per year and maintains the substantially same routes. Therefore, impacts to viewsheds will be similar to or decrease compared to impacts currently occurring because the number of authorized flights under the ATMP will be the same as the average number of flights from 2017-2019, and routes will remain similar as compared to existing conditions. They would therefore not be considered significant, and because altitudes will increase when compared to existing flight operations, and therefore visitors are less likely to notice them, new impacts from the ATMP are expected to result in beneficial impacts to viewsheds compared to current conditions.</p>
<p>Visitor Use and Experience Recreation Resources</p>	<p>Commercial air tours offer a recreational experience for those who wish to view the Park from a different vantage point. Because the number of commercial air tours under the ATMP is consistent with the average number of flights from 2017-2019, there are no or minimal changes anticipated to the number of commercial air tours offered per year compared to current conditions.</p> <p>Currently, customers on commercial air tours are not required to pay an entrance fee at the Park, nor are the commercial air tour operators required to pay a fee to the Park.</p>
<p>Visitor Use and Experience Visitor Use and Experience</p>	<p>The NPS allows visitor uses that are appropriate to the purpose for which the Park was established and can be sustained without causing unacceptable impacts to Park resources or values. Unacceptable impacts are impacts that, individually or cumulatively, will unreasonably interfere with Park programs or activities including interpretive programs, or the atmosphere of peace and tranquility, or the natural soundscape maintained in wilderness and natural, historic, or commemorative locations within the Park (National Park Service, 2006, 8.2).</p>

Effects of commercial air tours on Park visitor experience have been well documented over many years. See *Report on the Effects of Aircraft Overflights on the National Park System* (Department of Interior/National Park Service, 1995). The primary effect of commercial air tours is the introduction of noise into the acoustic environment. Numerous studies have identified the value and importance of soundscapes as one of the motivations for visiting parks (Haas and Wakefield, 1998; McDonald et al., 1995; Merchan et al., 2014; Miller et al., 2018), including in a cross-cultural context (Miller et al., 2018). Other studies have focused specifically on the effects of aircraft on the visitor experience both in parks and protected areas, and a laboratory setting, indicating that aircraft noise negatively impacts the visitor experience (Anderson et al., 2011; Ferguson, 2018; Mace et al., 2013; Rapoza et al., 2015).

Currently, some Park visitors may hear noise from commercial air tours, which may disrupt visitors or degrade the visitor experience at the Park by disturbing verbal communications and masking the sounds of nature. For example, noise from commercial air tours may disrupt visitors during interpretive and educational programs at historical sites or while hiking, camping, fishing, or participating in other activities. Visitors respond differently to noise from commercial air tour overflights – noise may be more acceptable to some visitors than others. Visitors in backcountry and wilderness areas often find commercial air tours more intrusive than visitors in developed and frontcountry areas where noise from commercial air tours may not be as audible (Rapoza et al., 2015; Anderson et al., 2011).

Visitor points of interest include campgrounds, visitor centers, and trails. Ranger-led education and interpretative programs also occur across the Park. Noise disturbances to visitors from commercial air tours are not expected to measurably change under the ATMP because the ATMP authorizes the same number of commercial air tours as the average number of flights from 2017-2019 on substantially the same routes. Altering routes to avoid noise sensitive sites (such as historic districts) will make a noticeable improvement at popular locations where outdoor educational and interpretive programs are common (see *Noise Technical Analysis* below). The ATMP limits the number of Black and Blue route tours which will further improve the conditions of noise over the backcountry. Additionally, the minimum flight altitude of 2,600 ft. AGL will decrease the extent and intensity of noise in areas directly under commercial air tour routes (see *Noise Technical Analysis* below). It should be noted that when the altitude of an aircraft is increased, the total area exposed to the noise from that aircraft may also increase depending on the surrounding terrain. Although the area, and therefore number of visitors, exposed to noise might increase with higher altitudes, this would not meaningfully affect visitor experience because of the attenuation of sound from the higher altitude and transient nature of the impacts. On days when commercial air tours will occur, noise levels above 52 dBA (which is associated with speech interference) will occur for less than five minutes (non-contiguous) in areas directly under the commercial air tour routes (see Figure 3 in the *Noise Technical Analysis* below). Finally, limiting the operation of commercial air tours to the time period from two hours after sunrise until two hours before sunset, or to the time period beginning at sunrise and ending at sunset for quiet technology aircraft, provides times when visitors seeking solitude may explore the Park without disruptions from commercial air tours. Collectively, these changes from existing operations and their effect on the current condition of visitor experience will result in beneficial impacts to the visitor experience at the Park.

<p>Wilderness Wilderness</p>	<p>Approximately 89% of the Park (464,544 acres) is recommended or proposed wilderness (418,031 acres recommended, 46,513 acres proposed), which is managed as designated wilderness by the NPS, pursuant to the 2006 NPS Management Policies.</p> <p>Section 2(a) of the Wilderness Act states that wilderness areas “shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character.” The NPS manages wilderness to enhance wilderness character consistent with the Act and generally manages for the natural, untrammeled, undeveloped, solitude and unconfined recreation, and other features of value wilderness character qualities. Commercial air tours over the Park may impact the following qualities of wilderness character: opportunity for solitude, the natural quality, and other features of value (e.g., cultural resources). Aircraft that land in wilderness detract from the undeveloped quality of wilderness. Because commercial air tours do not land in wilderness or parks, the undeveloped quality of wilderness is not considered here.</p> <p><i>Keeping it Wild 2, An Updated Interagency Strategy to Monitor Trends in Wilderness Character Across the National Wilderness Preservation System</i> (Landres, et al., 2015) notes that solitude includes attributes such as “separation from people and civilization, inspiration (an awakening of the senses, connection with the beauty of nature and the larger community of life), and a sense of timelessness (allowing one to let go of day-to-day obligations, go at one’s own pace, and spend time reflecting)” (p. 51). A review of research suggests that solitude encapsulates a range of experiences, including privacy, being away from civilization, inspiration, self-paced activities, and a sense of connection with times past” (Borrie and Roggenbuck, 2001). Generally, solitude improves when sights and sounds of human activity are remote. Commercial air tours can represent both a sight and sound of human activity and therefore detract from this quality of wilderness character.</p> <p>All of the routes included in the ATMP fly over recommended or proposed wilderness after they enter the Park. These areas will experience noise from commercial air tours and the noise may disrupt the solitude of these areas. However, the Black and Blue routes have the much larger noise footprints than the Red and Light Blue routes. By limiting the Black and Blue routes to 26 and 17 flights per year, respectively, the backcountry of the Park will be better protected from commercial air tour noise as compared to current conditions. On days when commercial air tours occur, noise levels above 35 dBA may approach 35 minutes in the area near Gatlinburg and be noticeable for less time at other locations which are beneath and adjacent to the routes (see Figure 2). <i>See Noise Technical Analysis</i> below. The 2,600 ft. AGL minimum altitude requirement will decrease the intensity of noise in areas directly under air tour routes (see <i>Noise Technical Analysis</i> below). While some impact will remain, solitude will not be repeatedly interrupted as the ATMP includes restrictions to limit the daily occurrence of commercial air tours over the Park.</p> <p>Biological resources are part of the natural quality of wilderness. <i>Keeping it Wild</i> states that “one of the major themes running through the Wilderness Act is that wilderness” should be “managed so as to preserve its natural conditions” (Wilderness Act, Section 2(a) and 2(c), respectively). Historically, wilderness is strongly associated with protecting ecological systems from the impacts of modern people (Sutter, 2004). The natural quality is preserved when wilderness ecological systems are substantially free</p>
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	<p>from the effects of modern civilization. Wildlife are considered part of these ecological systems and ideally wildlife are free from the effects of modern civilization, including noise, in wilderness. As described above, wildlife may be exposed to noise from commercial air tours, but effects are expected to be insignificant based on the limited number of flights, flight altitude, and modeled noise levels. The natural quality of wilderness is expected to improve slightly under the ATMP based on increased flight altitudes and lower maximum noise levels.</p> <p>In conclusion, impacts to solitude and the natural quality are limited only to areas managed as wilderness areas below designated routes, will be limited on a daily basis, and noise will be reduced when compared to current condition because of the 2,600 ft. AGL minimum altitude requirement. For all of these reasons, impacts to areas managed as wilderness will be an improvement over current conditions. Furthermore, the ATMP will not authorize commercial air tours over much of the Park, including the entire south side of the Park, which will limit the extent to which operators may extend flights into areas managed as wilderness in the future, absent an amendment to the ATMP.</p>
Cumulative Effects	<p>The cumulative impact analysis for the ATMP focuses on noise and viewshed impacts. Impacts to other resources, i.e., wildlife, visitor experience, ethnographic resources, wilderness, etc. all result from noise or viewshed impacts.</p> <p>Many activities may contribute noise to the Park’s acoustic environment. Aviation activities such as commercial air tours more than 5,000 ft. AGL, and overflights by high altitude jets, private aviation, or military overflights regardless of altitude are not subject to regulation under NPATMA. These flights may detract from the viewshed of the Park as well.</p> <p>The Park’s developed areas and roadways also contribute to ambient noise. Major roadways within the Park include U.S. Highway 321 and 441. Additionally, the City of Gatlinburg and associated developed areas are present just outside the Park’s northern boundary, portions of which are within ½-mile of the Park’s boundary. Maintenance and other administrative activities, such as search and rescue efforts, etc. may also contribute noise to the acoustic environment, but are generally temporary, irregular, and do not last more than a few hours. Intermittent construction activities may add noise to the Park acoustic environment, though generally those occur in already developed areas where noise is generally more acceptable and expected.</p> <p>The agencies have qualitatively considered the cumulative impacts of commercial air tours along with impacts from existing activities generally described above. Depending on the level of Park activities at various times of the year, the noise contribution from other sources such as road traffic and visitor use in developed areas may be substantial. There is no known future project that would significantly contribute noise impacts to the project area. Considering existing ambient noise sources and foreseeably future noise sources, the commercial air tour noise is a small contribution of overall noise. Furthermore, the ATMP establishes operating conditions to protect Park natural and cultural resources, and it is unlikely it would measurably change the overall acoustic environment. Commercial air tours over Park roadways are likely to be masked by existing noise and therefore the impacts would be de minimis. Finally, the ATMP does not add new noise to the existing acoustic environment. Therefore, when considering other sources of noise in the Park that are likely to continue after the ATMP is implemented, the continuation of 946 commercial air tours per year on substantially the</p>

	<p>same routes will not result in a meaningful change to the current condition of the visual or auditory landscape at the Park.</p> <p>As noted above under viewsheds, visual or viewshed impacts associated with aircraft are most noticeable because of noise. As described above, the ATMP will not result in significant impacts to the acoustic environment. Aircraft may also be less noticeable because the ATMP has increased the flight altitude which decreases the noise along the flight path. Additionally, there should not be significant cumulative changes to the viewshed since the number of air tours are not increasing but is consistent with the 3-year average.</p> <p>Therefore, no significant cumulative environmental impacts are likely to result from the ATMP.</p>
Indirect Effects	<p>The ATMP applies to all commercial air tours over the Park or within ½-mile outside the boundary of the Park, including any tribal lands within that area, that are flown below 5,000 ft. AGL. These flights takeoff and land in Sevierville, which is approximately nine miles from the nearest point of the Park’s ½-mile boundary buffer and is outside of the area regulated by the ATMP. Between this area and the Park’s ½-mile boundary, land uses primarily consist of residential and commercial developed areas, agricultural lands, and undeveloped open space land uses. Commercial air tours traveling to and from the Park could result in some temporary noise disturbances in these areas. Commercial air tours may fly over residential areas resulting in temporary noise disturbance to homeowners. Undeveloped lands will likely experience similar impacts to those described in other sections of this ESF, i.e., temporary disturbances to wildlife, etc. although flight altitudes would likely be consistent with current operations (i.e., lower than what the ATMP requires) outside the Park boundary resulting in potentially more adverse impacts than those occurring within the ATMP boundary. Because of daily and annual limitations on the number of commercial air tours over the Park permitted by the ATMP, these effects are expected to be insignificant.</p> <p>Since the ATMP authorizes the same number of commercial air tours per year as existing conditions on substantially the same routes, it is unlikely that the frequency and nature of these disturbances outside of the ½-mile boundary of the Park would result in a change from current condition. Therefore, the agencies consider indirect effects of the ATMP to be negligible. However, since the ATMP cannot regulate the flight path, altitude, duration, etc. of flights more than ½-mile outside of the Park’s boundary (though operators must comply with relevant FAA regulations), the agencies are unable to require operators to continue to fly more than ½ mile outside the boundary of the Park in the manner in which they currently fly under existing conditions or to require operators to change any operational parameters (e.g., altitude or routes). However, the agencies are unaware of any reason the operators would deviate from their current flight paths outside the ATMP boundary since their routes have not substantially changed.</p>

ADDITIONAL TECHNICAL ANALYSIS

Air Quality Technical Analysis

Potential air quality impacts from proposed commercial air tour operations were estimated using an emissions inventory approach. Annual flight miles by aircraft type were calculated for the Park – 50,895 flight miles. The two aircraft that fly commercial air tours over the Park are the Bell 206 and Robinson R44 (both helicopters).

The FAA’s Aviation Environmental Design Tool (AEDT) version 3d was used to develop emission factors (pounds of emissions per mile flown) for these aircraft, which were derived from the Environmental Protection Agency’s (EPA) AP-42: Compilation of Emission Factors (United States Environmental Protection Agency, Office of Noise Abatement and Control, 1974). Although the AP-42 emission factors represent the best available data, they have not been updated since the 1990s and most aircraft engines in use today are likely to be cleaner due to less-polluting fuels and improvements in engine emissions controls. Therefore, these emission rates are considered a conservative estimate of emission rates for aircraft used in commercial air tours.

The maximum emissions (tons per year) were calculated for the Park by multiplying the total number of operations (by aircraft type), the longest routes flown by each aircraft type within the Park and the ½-mile boundary outside of the Park, and the aircraft-specific emission factor. The sum of total emissions by aircraft type represent the maximum emissions conditions for the Park. To highlight the potential impacts to ambient air quality for all criteria pollutants, the Park’s emissions results were compared with the EPA’s General Conformity *de minimis* thresholds for the most stringent⁹ nonattainment areas. EPA’s General Conformity *de minimis* thresholds represent a surrogate for impacts to ambient air quality.

The NPS must also consider impacts to resources that are sensitive to air pollution under the NPS Organic Act mandates and the Clean Air Act (CAA). Such resources include (but are not limited to) sensitive vegetation, streams and lakes, aquatic biota and visibility. These resources are typically referred to as Air Quality Related Values (AQRVs). Parks designated Class I areas under the CAA also receive an additional measure of protection under the CAA provisions. The CAA gives the NPS an “affirmative responsibility to protect the air quality related values (including visibility) of any such lands within a Class I area.”

Additionally, a portion of the Park and the ½-mile boundary outside the Park is classified as Marginal Nonattainment for ozone (2015 standard), Moderate Nonattainment for PM_{2.5} (2006 standard), and Moderate Maintenance for carbon monoxide (1971 standard) and is thus subject to the General Conformity regulations. However, since emissions estimates for all pollutants in the entire Park and the ½-mile boundary outside the Park are well below the most stringent *de minimis* levels (Table 2), a General Conformity Determination is not required. Furthermore, the most stringent *de minimis* emission thresholds for federal conformity determinations are sufficiently low relative to emission thresholds the NPS will use to determine whether additional air quality analysis is necessary under a NEPA analysis. Given this, and the fact that the maximum projected emissions from overflights in the Park are well below these *de minimis* levels (< 1 TPY for particulate matter and sulfur dioxide, and <2 TPY for nitrogen oxides – criteria pollutants that have the most significant impact on AQRVs), it is expected that emissions from overflights in the Park under the ATMP will not meaningfully impact AQRVs, or local air quality, and will not have regional impacts from implementation of the ATMP in the Park.

Table 2. Comparison of the emissions inventory for proposed air tours in the Park with *de minimis* thresholds for the most stringent nonattainment areas.

Pollutant	<i>de minimis</i> threshold (Tons per Year)	Emissions Inventory for the Park, Robinson R44 (Tons per Year)	Emissions Inventory for the Park, Bell 206 (Tons per Year)
Carbon Monoxide	100	64.136	0.444
Volatile Organic Compounds	10	0.533	0.019
Nitrogen Oxides	10	0.010	0.312
Particulate Matter, diam. < 2.5 µm	70	0.037	0.044

⁹The most stringent non-attainment areas (i.e., lowest *de minimis* thresholds) are categorized as “extreme” for ozone (VOCs or NOx) and “serious” for particulate matter and sulfur dioxide.

Particulate Matter, diam. < 10 µm	70	0.037	0.044
Lead	25	0.032	0.000
Sulfur Oxides	70	0.051	0.061
Carbon Dioxide	n/a	137.166	164.313

NOISE TECHNICAL ANALYSIS

Indicators of acoustic conditions

There are numerous ways to measure the potential impacts of noise from commercial air tours on the acoustic environment of a park, including intensity, duration, and spatial footprint of the noise. The metrics and acoustical terminology used for the ATMP are shown in Table 3.

Table 3. Primary metrics used for the noise analysis.

Metric	Relevance and citation
Time Above 35 dBA ¹⁰	<p>The amount of time (in minutes) that aircraft sound levels are above a given threshold (i.e., 35 dBA)</p> <p>In quiet settings, outdoor sound levels exceeding 35 dB degrade experience in outdoor performance venues (American National Standards Institute (ANSI), 2007); blood pressure increases in sleeping humans (Haralabidis et al., 2008); maximum background noise level inside classrooms (American National Standards Institute/Acoustical Society of America S12.60/Part 1-2010).</p>
Time Above 52 dBA ¹⁰	<p>The amount of time (in minutes) that aircraft sound levels are above a given threshold (i.e., 52 dBA)</p> <p>This metric represents the level at which one may reasonably expect interference with Park interpretive programs. At this background sound level (52 dB), normal voice communication at five meters (two people five meters apart), or a raised voice to an audience at ten meters would result in 95% sentence intelligibility (United States Environmental Protection Agency, Office of Noise Abatement and Control, 1974).</p>
Equivalent sound level, $L_{Aeq, 12\text{ hr}}$	<p>The logarithmic average of commercial air tour sound levels, in dBA, over a 12-hour day. The selected 12-hour period is 7 a.m. to 7 p.m. to represent typical daytime commercial air tour operating hours.</p>
Day-night average sound level, L_{dn} (or DNL)	<p>The logarithmic average of sound levels, in dBA, over a 24-hour day, DNL takes into account the increased sensitivity to noise at night by including a ten dB penalty between 10 p.m. and 7 a.m. local time.</p> <p>Note: Both $L_{Aeq, 12\text{ hr}}$ and L_{dn} characterize:</p> <ul style="list-style-type: none"> • Increases in both the loudness and duration of noise events • The number of noise events during specific time period (12 hours for $L_{Aeq, 12\text{ hr}}$ and 24-hours for L_{dn}) <p>If there are no nighttime events, then $L_{Aeq, 12\text{ hr}}$ is arithmetically three dBA higher than L_{dn}.</p> <p>The FAA's (2015 Exhibit 4-1) indicators of significant impacts are for an action that would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65</p>

¹⁰ dBA (A-weighted decibels): Sound is measured on a logarithmic scale relative to the reference sound pressure for atmospheric sources, 20 μPa . The logarithmic scale is a useful way to express the wide range of sound pressures perceived by the human ear. Sound levels are reported in units of decibels (dB) (ANSI S1.1-1994, American National Standard Acoustical Terminology). A-weighting is applied to sound levels in order to account for the sensitivity of the human ear (ANSI S1.42-2001, Design Response of Weighting Networks for Acoustical Measurements). To approximate human hearing sensitivity, A-weighting discounts sounds below 1 kHz and above 6 kHz.

	dB level due to a DNL 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe ¹¹ .
Maximum sound level, L_{max}	The loudest sound level, in dBA, generated by the loudest event; it is event-based and is independent of the number of operations. L_{max} does not provide any context of frequency, duration, or timing of exposure.

ATMP as related to indicators

In order to provide a conservative evaluation of potential noise effects produced by commercial air tours under the ATMP, the CE analysis is based on a representation of a peak day¹² of commercial air tour activity. For the busiest year of commercial air tour activity from 2017-2019 based on the total number of commercial air tour operations and total flight miles over the Park, the 90th percentile day was identified for representation of a peak day in terms of number of operations, and then further assessed for the type of aircraft and route flown to determine if it is a reasonable representation of the commercial air tour activity over the Park. For the Park, the 90th percentile day was identified as the following:

- Red Route (SNPF) – three flights, BHT-206-L1 aircraft
- Light Blue Route (SSMF) – one flight, BHT-206-L1 aircraft
- Blue Route (SMSF) – one flight, BHT-206-L1 aircraft
- Orange Route (Gatlinburg) – one flight, Bell 206-L aircraft
- Purple Route (Grand Tour/See It All) – one flight, Bell 206-L aircraft

Noise contours for the following acoustic indicators were developed using the FAA’s AEDT version 3d and are provided below. A noise contour presents a graphical illustration or “footprint” of the area potentially affected by the noise.

- Time above 35 dBA (minutes) – see Figure 2
- Time above 52 dBA (minutes) – see Figure 3
- Equivalent sound level, $L_{Aeq, 12hr}$ – see Figures 4 and 5
 - Note: Contours are not presented for L_{dn} (or DNL) as it is arithmetically three dBA lower than $L_{Aeq, 12hr}$ if there are no nighttime events, which is the case for the ATMP modeled over the Park.
- Maximum sound level or L_{max} – see Figure 6

¹¹ FAA Order 1050.1F, Exhibit 4-1

¹² As required by FAA policy, the FAA typically represents yearly conditions as the Average Annual Day (AAD). However, because ATMP operations in the park occur at low annual operational levels and are highly seasonal in nature it was determined that a peak day representation of the operations would more adequately allow for disclosure of any potential impacts. A peak day has therefore been used as a conservative representation of assessment of AAD conditions.

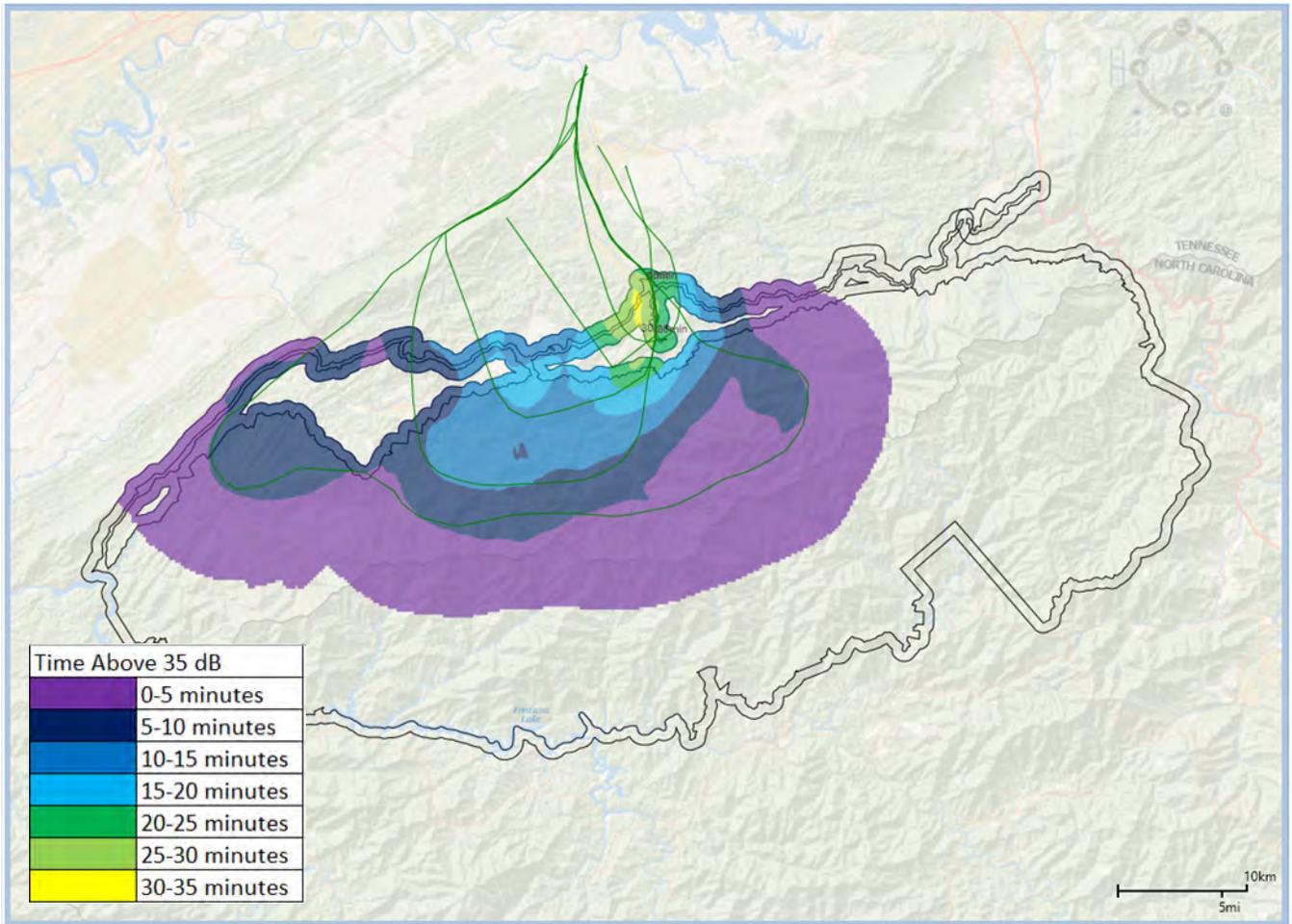


Figure 2. Noise contour results for Time Above 35 dBA

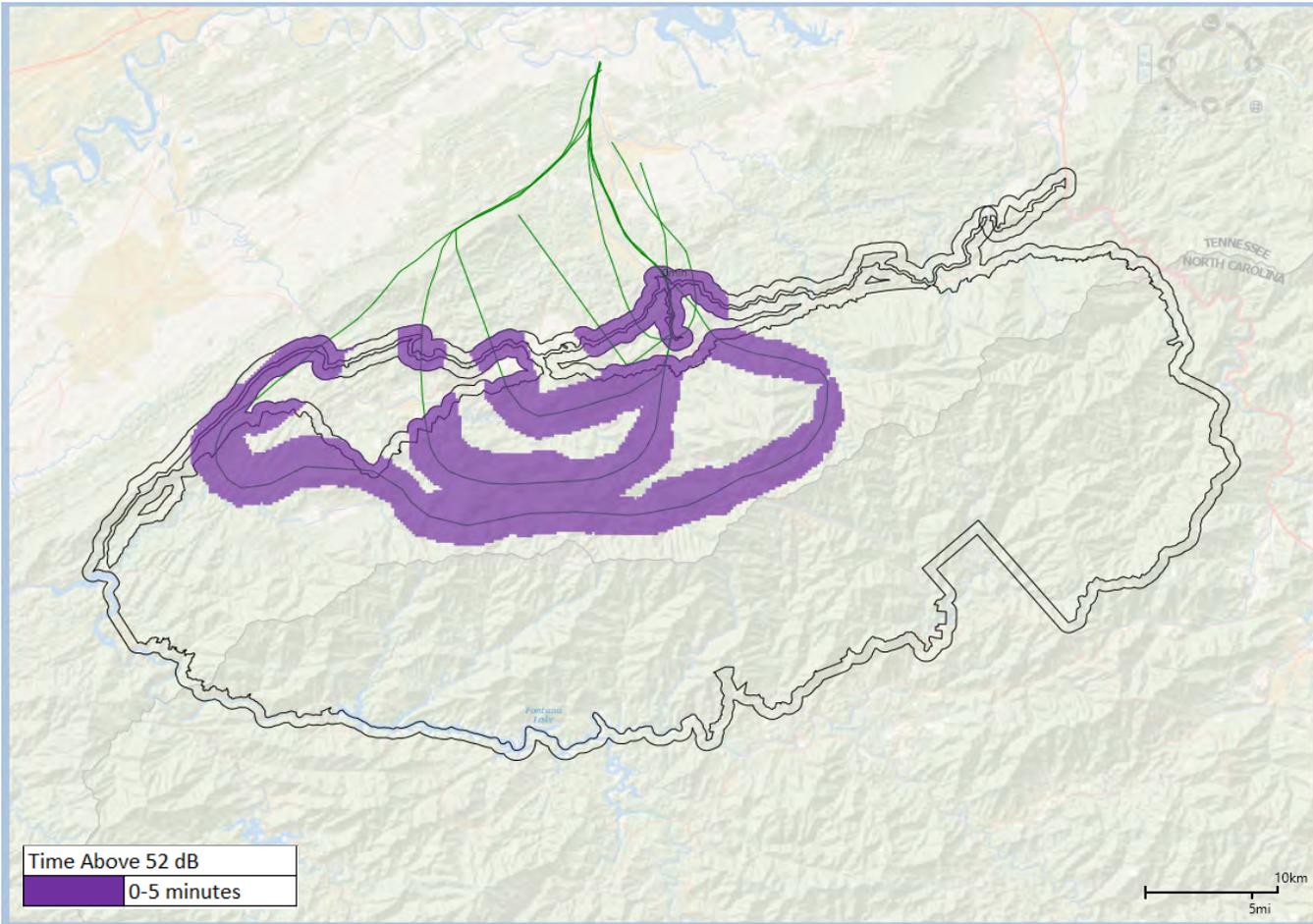


Figure 3. Noise contour results for Time Above 52 dBA

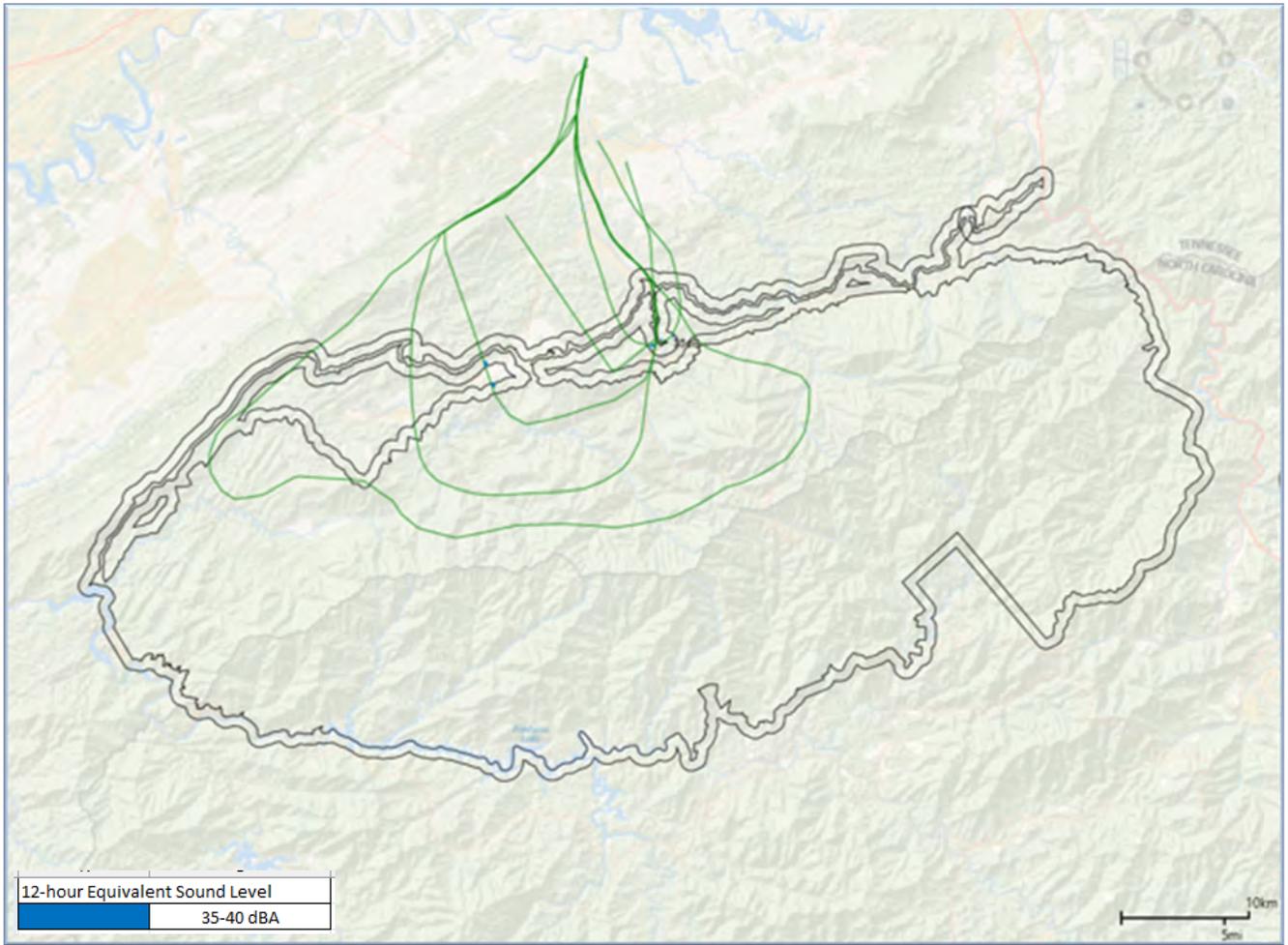


Figure 4. Noise contour results for $L_{Aeq, 12hr}$

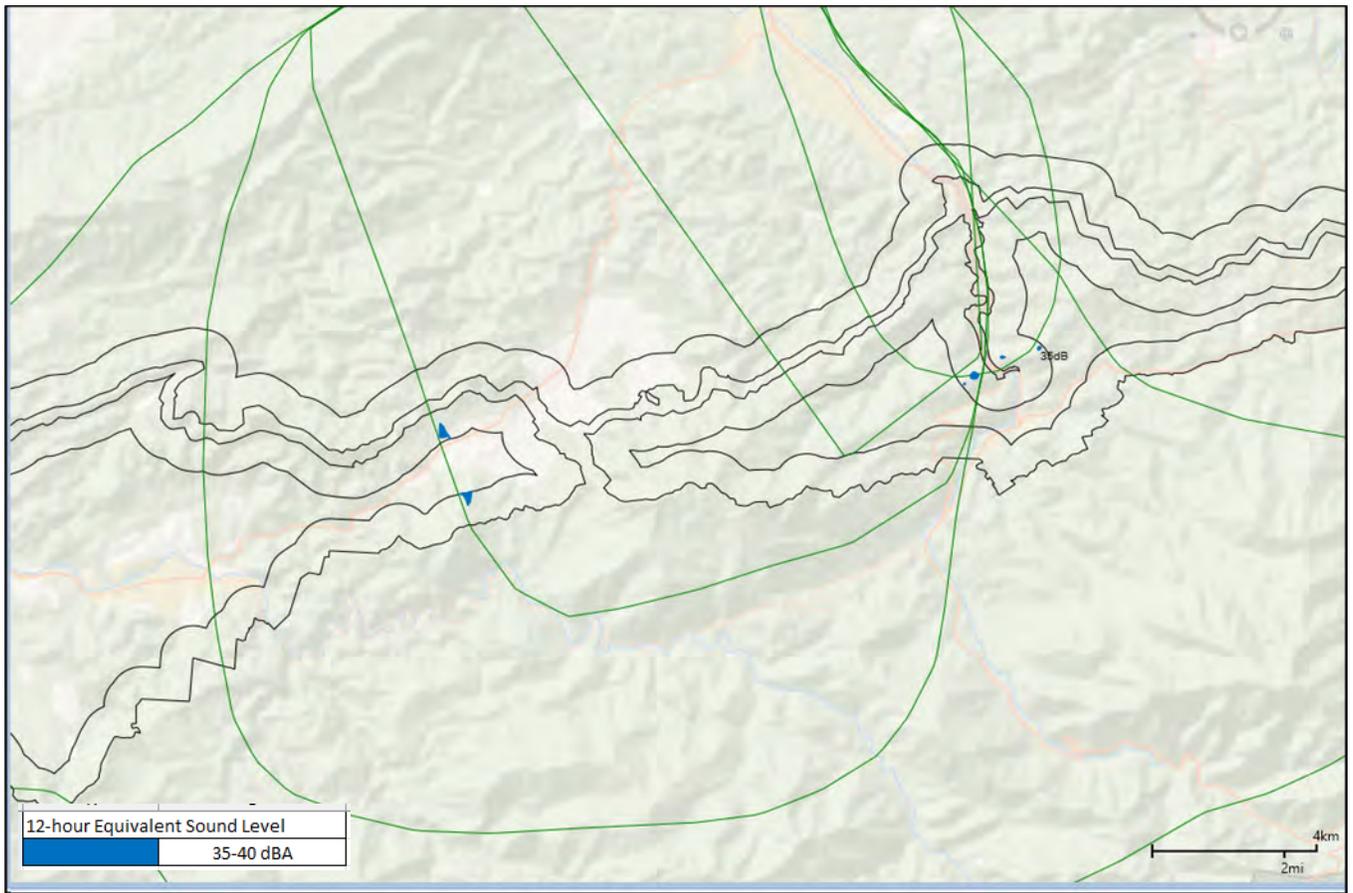


Figure 5. Zoomed-in noise contour results for $L_{Aeq, 12hr}$

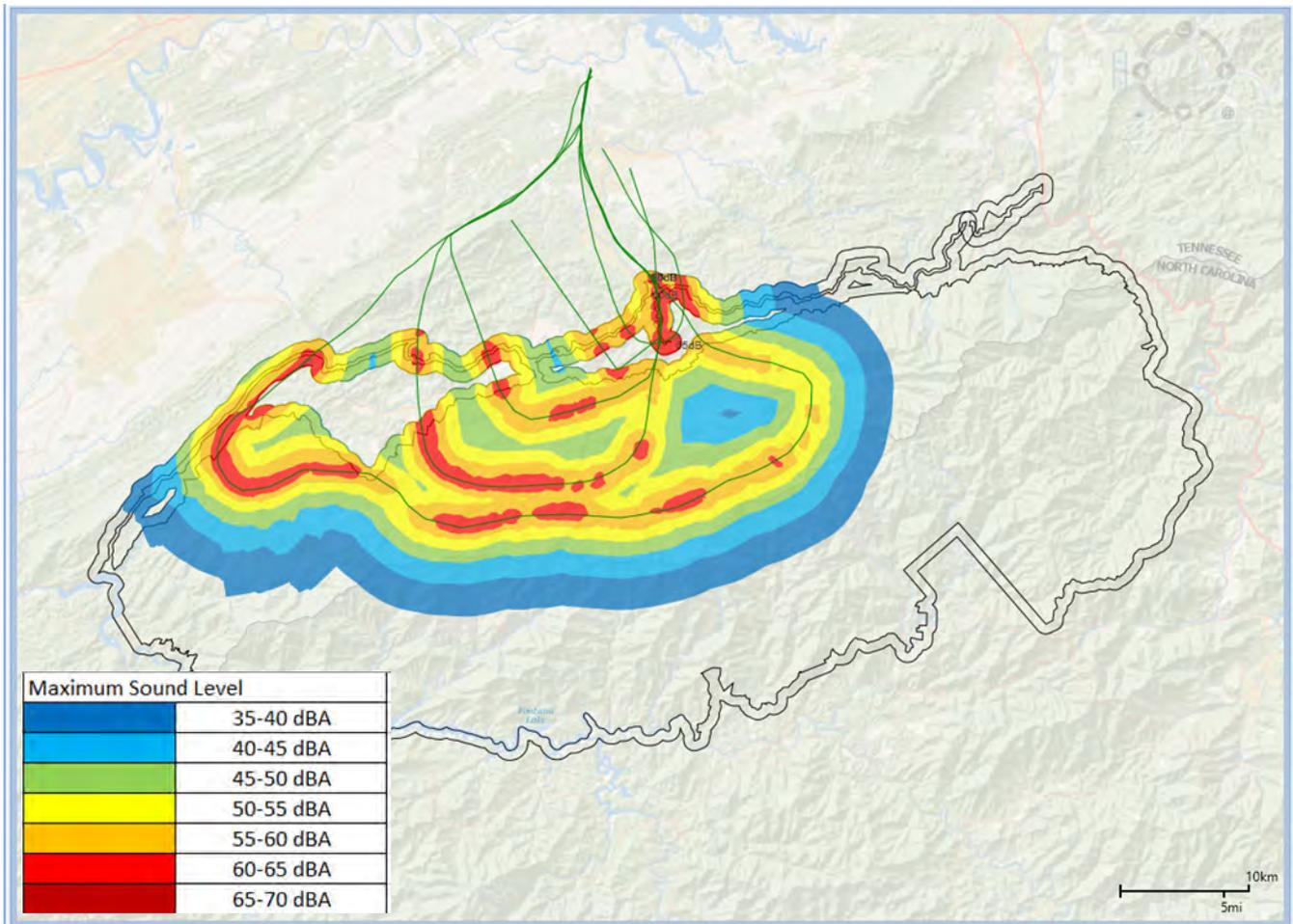


Figure 6. Noise contour results for L_{max}

LIST OF REFERENCES

- American National Standards Institute, Inc. (2001). Design Response of Weighting Networks for Acoustical Measurements. *Acoustical Society of America*, ANSI S1.42-2001, i-1. [https://webstore.ansi.org/preview-pages/ASA/preview_ANSI+ASA+S1.42-2001+\(R2011\).pdf](https://webstore.ansi.org/preview-pages/ASA/preview_ANSI+ASA+S1.42-2001+(R2011).pdf)
- American National Standards Institute, Inc. (2002). Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools, Part 1: Permanent Schools. *Acoustical Society of America*, ANSI/ASA S12.60-2010/Part 1. [https://webstore.ansi.org/preview-pages/ASA/preview_ANSI+ASA+S12.60+Part+1-2010+\(R2020\).pdf](https://webstore.ansi.org/preview-pages/ASA/preview_ANSI+ASA+S12.60+Part+1-2010+(R2020).pdf)
- American National Standards Institute, Inc. (2004). Acoustical Terminology. *Acoustical Society of America*, ANSI S1.1-1994 (R2004). <https://webstore.ansi.org/Standards/ASA/ANSIS11994R2004>
- American National Standards Institute, Inc. (2007). Quantities and Procedures for Description and Measurement of Environmental Sound — Part 5: Sound Level Descriptors for Determination of Compatible Land Use. *Acoustical Society of America*, ASA S12.9-2007/PART 5 (R2020), 1-20. https://www.techstreet.com/standards/asa-s12-9-2007-part-5-r2020?product_id=1534045
- Anderson, G., Rapoza, A., Fleming, G., & Miller, N. (2011). Aircraft noise dose-response relations for national parks. *Noise Control Engineering Journal*, 59, 519. <https://doi.org/10.3397/1.3622636>
- Benfield, J., Taff, B. D., Weinzimmer, D., & Newman, P. (2018). Motorized Recreation Sounds Influence Nature Scene Evaluations: The Role of Attitude Moderators. *Frontiers in Psychology*, 9:495. <https://doi.org/10.3389/fpsyg.2018.00495>
- Borrie, W. T., & Roggenbuck, J. W. (2001). The Dynamic, Emergent, and Multi-Phasic Nature of On-Site Wilderness Experiences. *Journal of Leisure Research*, 33(2), 202–228. <https://doi.org/10.1080/00222216.2001.11949938>
- Carpenter, G. & Beeco, A. J. (2021). Acoustic Monitoring Report 2016. <https://irma.nps.gov/DataStore/DownloadFile/662080>
- Colorado Division of Wildlife (2020). Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors. *Department of Natural Resources*, 1-7. <https://cpw.state.co.us/Documents/WildlifeSpecies/LivingWithWildlife/Raptor-Buffer-Guidelines.pdf>
- Department of Interior, National Park Service (1995). Report on effects of aircraft overflights on the National Park System. *Report to Congress*, 1.1-10.23. <https://www.nonoise.org/library/npreport/intro.htm>
- Federal Aviation Administration (2015). FAA Order 1050.1F, Environmental impacts: Policies and procedures. *U.S. Department of Transportation*, 1.1-11.4. https://www.faa.gov/documentLibrary/media/Order/FAA_Order_1050_1F.pdf
- Ferguson, L.A. (2018). Strategies for managing natural sounds for human experience and ecosystem services (Dissertation). *The Pennsylvania State University The Graduate School College of Health and Human Development*, 1-176. https://etda.libraries.psu.edu/files/final_submissions/17621
- Gutzwiller, K. J., D'Antonio, A. L., & Monz, C. A. (2017). Wildland recreation disturbance: Broad-scale spatial analysis and management. *Frontiers in Ecology and the Environment*, 15(9), 517–524. <https://doi.org/10.1002/fee.1631>
- Haas, G. E. & Timothy J. W. (1998). National parks and the American public: a national public opinion survey on the National Park System: a summary report. *The Association*, 1-32.

- Haralabidis A.S., Dimakopoulou, K., Vigna-Taglianti, F., Giampaolo, M., Borgini, A., Dudley, M., ... & Jarup, L. (2008). Acute effects of night-time noise exposure on blood pressure in populations living near airports. *European Heart Journal Advance Access*. <https://academic.oup.com/eurheartj/article/29/5/658/440015>
- Kunc, H. P., McLaughlin, K. E., & Schmidt, R. (2016). Aquatic Noise Pollution: Implications for Individuals, Populations, and Ecosystems. *Proceedings of the Royal Society B: Biological Sciences*, 283(1836), 20160839. <https://doi.org/10.1098/rspb.2016.0839>
- Kunc, H. P., & Schmidt, R. (2019). The effects of anthropogenic noise on animals: A meta-analysis. *Biology Letters*, 15(11), 20190649. <https://doi.org/10.1098/rsbl.2019.0649>
- Landres, P., Barns, C., Boutcher, S., Devine, T., Dratch, P., Lindholm, A., ... & Simpson, E. (2015). Keeping it wild 2: An updated interagency strategy to monitor trends in wilderness character across the National Wilderness Preservation System. Gen. Tech. Rep. RMRS-GTR-340. *Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station*. 114 p. DOI: <https://doi.org/10.2737/RMRS-GTR-340>
- Lee, C., MacDonald, J., Scarpone, C., & Rapoza, A. (2016). Great Smoky Mountains National Park: Baseline Ambient Sound Levels 2005 and 2006.
- Mace, B. L., Corser, G. C., Zitting, L., & Denison, J. (2013). Effects of overflights on the national park experience. *Journal of Environmental Psychology*, 35, 30–39. <https://doi.org/10.1016/j.jenvp.2013.04.001>
- McDonald, C. D., Baumgarten, R. M. & Iachan, R. (1995). Aircraft management studies: National Park Service Visitors Survey. *National Park Service, U.S. Department of the Interior*, HMMH Report No. 290940.12; NPOA Report No. 94-2. <https://ntrl.ntis.gov/NTRL/dashboard/searchResults/titleDetail/PB95196002.xhtml>
- Merchan, C. I., Diaz-Balteiro, L., & Soliño, M. (2014). Noise pollution in national parks: Soundscape and economic valuation. *Landscape and Urban Planning*, 123, 1–9. <https://doi.org/10.1016/j.landurbplan.2013.11.006>
- Miller, Z., Taff, B.D., & Newman, P. (2018). Visitor Experiences of Wilderness Soundscapes in Denali National Park and Preserve. *International Journal of Wilderness*, 24(2). <https://ijw.org/2018-visitor-experiences-of-wilderness-soundscapes/>
- National Park Service (1992). National Register Bulletin 38. <https://www.nps.gov/subjects/nationalregister/upload/NRB38-Compleweb.pdf>
- National Park Service (2002). NPS-28: Cultural Resource Management Guideline. *National Park Service*, introduction, A-F. https://www.nps.gov/parkhistory/online_books/nps28/28appena.htm
- National Park Service (2006). Management Policies, 2006. https://www.nps.gov/subjects/policy/upload/MP_2006.pdf
- National Park Service (2019). Animals, Great Smoky Mountains National Park. *National Parks Service*. Retrieved April 7, 2022, from <https://www.nps.gov/grsm/learn/nature/animals.htm>
- Rapoza, A., Sudderth, E., & Lewis, K. (2015). The relationship between aircraft noise exposure and day-use visitor survey responses in backcountry areas of national parks. *The Journal of the Acoustical Society of America*, 138(4), 2090–2105. <https://doi.org/10.1121/1.4929934>
- Richardson, C. T., & Miller, C. K. (1997). Recommendations for Protecting Raptors from Human Disturbance: A Review. *Wildlife Society Bulletin (1973-2006)*, 25(3), 634–638. <http://www.jstor.org/stable/3783512>

Romin L. A. & Muck, J. A. (2002). Utah Field Office Guidelines for Raptor from Human and Land Use Disturbances. *U.S. Fish and Wildlife Service, Utah Field Office, Salt Lake City*, 1-31. <http://www.oilandgasbmps.org/docs/UT35-RAPTORGUIDE.pdf>

Shannon, G., McKenna, M.F., Angeloni, L.M., Crooks, K.R., Frstrup, K.M., Brown, E., Warner, K.A., Nelson, M.D., White, C., Briggs, G., McFarland, S., & Wittemyer, G. (2016). A synthesis of two decades of research documenting the effects of noise on wildlife. *Biological Reviews*, 91(4) 982-1005. <https://doi.org/10.1111/brv.12207>

Sutter, P. (2004). *Driven wild: how the fight against automobiles launched the modern wilderness movement*. Seattle, WA: University of Washington Press. 343 p. <https://www.environmentandsociety.org/mml/driven-wild-how-fight-against-automobiles-launched-modern-wilderness-movement>

United States Census Bureau (2021). Explore census data. *United States Census Bureau*. <https://data.census.gov/cedsci/>

United States Environmental Protection Agency, Office of Noise Abatement and Control (1974). Information on levels of environmental noise requisite to protect public health and welfare with an adequate margin of safety. NPC Online Library, 550/9-74-004, 1-78. <https://www.nrc.gov/docs/ML1224/ML12241A393.pdf>

United States Fish and Wildlife Service (2007). National Bald Eagle Management Guidelines. *United States Department of Agriculture*. 1-23. https://www.aphis.usda.gov/plant_health/plant_pest_info/emt/downloads/EaglePrctcnGuidance.pdf

Weinzimmer, D., Newman, P., Taff, D., Benfield, J., Lynch, E., & Bell, P. (2014). Human Responses to Simulated Motorized Noise in National Parks. *Leisure Sciences*, 36(3), 251–267. <https://doi.org/10.1080/01490400.2014.888022>

APPENDIX C

Categorical Exclusion Documentation Form



Categorical Exclusion Documentation Form (CE Form)

PROJECT INFORMATION

Project Title: Great Smoky Mountains National Park Air Tour Management Plan

PEPC Project Number: 100689

Project Type: Categorical Exclusion

Project Location: Sevier County, Blount County, and Cocke County, TN and Swain County and Haywood County, NC

PROJECT DESCRIPTION

The proposed action is to implement an Air Tour Management Plan (ATMP) for Great Smoky Mountains National Park (the Park). The ATMP includes the following operating parameters to mitigate impacts from commercial air tours on Park resources. For a full discussion of the impacts of commercial air tours and how these operating parameters will maintain or reduce impacts to Park resources, see the *Environmental Screening Form (ESF)*.

Commercial Air Tour Authorizations

Under the ATMP, 946 commercial air tours are authorized per year. Table 1 identifies the operators authorized to conduct commercial air tours and annual flight allocations.

Table 1. Commercial Air Tour Operations and Aircraft Type by Operator

Commercial Air Tour Operator	Annual Operations	Daily Operations	Aircraft Type
Whirl'd Helicopters, Inc.	864 tours Annual limit of 26 flights on the Black Route (SGTF) and 17 flights on the Blue Route (SMSF)	4 tours on Standard Days, with 40 Flex Days per year on which up to 5 tours are allowed	BHT-206-B, BHT-206-L1, BHT-206-L3, R-44-44, R-44-II, R-44-RavenII
Great Smoky Mountain Helicopter Inc. (Smoky Mountain Helicopters, M Helicopters of TN, Delta Helicopters, Cherokee Helicopters)	82 tours	1 tour on Standard Days, with 40 Flex Days per year on which up to 2 tours are allowed	BHT-206-B

Commercial Air Tours Routes and Altitudes

Commercial air tours authorized under the ATMP shall be conducted on designated air tour routes specific to each operator as depicted in Figure 1 and as described below:

Whirl'd Helicopters, Inc.:

- Red Route (SNPF): Air tours along the Red Route (SNPF) will follow the road corridors of Highway 321, Highway 441, Little River Road, and Wear Cove Gap Road. As this route turns north to exit the Park, the route will fly west of Wear Cove Gap Road.
- Light Blue Route (SSMF): Air tours along the Light Blue Route (SSMF) will enter the Park following along the road corridors of Highway 321 and Highway 441. Air tours on the Light Blue Route (SSMF) will stay at least one mile south of the Elkmont Historic District and Tremont.
- Black Route (SGTF): Air tours along the Black Route (SGTF) will enter the Park following along the road corridors of Highway 321 and Highway 441. Air tours will stay at least one-half mile north of the Appalachian National Scenic Trail and one mile north of Cades Cove Historic District.
- Blue Route (SMSF): Air tours along the Blue Route (SMSF) will stay at least one-half mile north of the Appalachian National Scenic Trail and one mile north of Cades Cove Historic District.

Great Smoky Mountain Helicopter Inc.:

- Orange Route (Gatlinburg): Air tours along the Orange Route (Gatlinburg) will cross over the Foothills Parkway west of Gatlinburg, head east over the Hwy 321 spur of the Foothills Parkway, and then exit back over the Foothills Parkway east of Gatlinburg. This route will only overfly the Foothills Parkway and will stay at least ½ mile outside of the remainder of the Park.
- Purple Route (Grand Tour/See It All): Air tours along the Purple Route (Grand Tour/See It All) will fly over the Foothills Parkways along the Hwy 321 spur heading south. The tour routes will then head west and exit the Park west of Gatlinburg. This route will only overfly the Foothills Parkway and will stay at least ½ mile outside of the remainder of the Park.

Altitude expressed in units above ground level (AGL) is a measurement of the distance between the ground surface and the aircraft. Air tours will fly no lower than 2,600 feet (ft.) AGL when over the Park or within ½ mile of the Park boundary. Except in an emergency or to avoid unsafe conditions, or unless otherwise authorized for a specified purpose, operators may not deviate from these routes designated and altitudes.

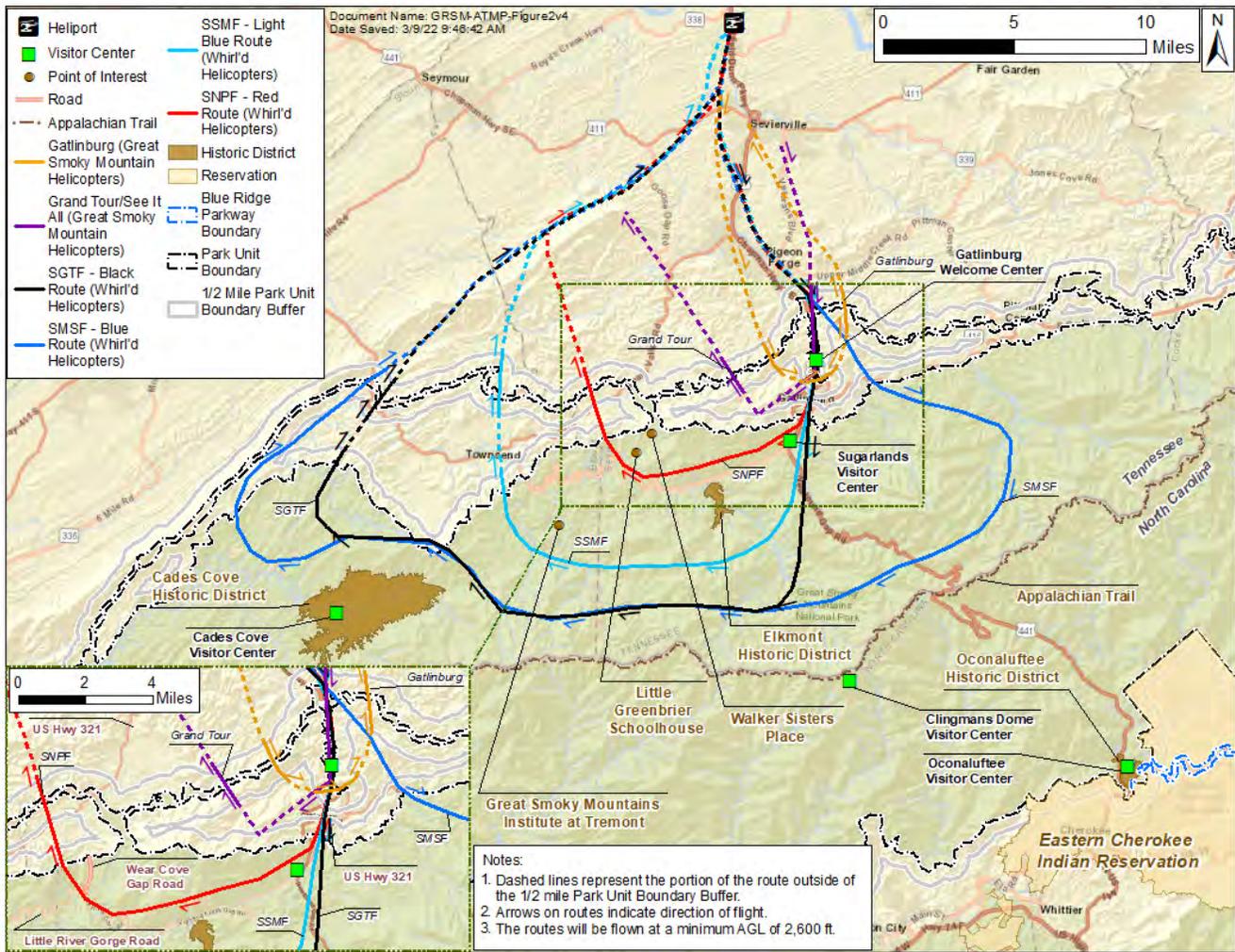


Figure 1. Commercial air tour routes over the Park designated in the ATMP

Aircraft Type

The aircraft types authorized to be used for commercial air tours are identified in Table 1. Any new or replacement aircraft must not exceed the noise level produced by the aircraft being replaced. In addition to any other applicable notification requirements, operators will notify the Federal Aviation Administration (FAA) and the National Park Service (NPS) in writing of any prospective new or replacement aircraft and obtain concurrence before initiating air tours with the new or replacement aircraft.

Day/Time

Except as provided in the “Quiet Technology Incentives” section below, air tours may operate two hours after sunrise until two hours before sunset, as defined by the National Oceanic and Atmospheric Administration (NOAA).¹ Air tours may operate any day of the year, except under circumstances provided in the following section entitled “Restrictions for Particular Events.”

Restrictions for Particular Events

The NPS can establish temporary no-fly periods that apply to commercial air tours for special events or planned Park management. Absent exigent circumstances or emergency operations, the NPS will provide a minimum of

¹ Sunrise and sunset data are available from the NOAA Solar Calculator, <https://www.esrl.noaa.gov/gmd/grad/solcalc/>

one month notice to the operators in writing in advance of the no-fly period. Events may include tribal ceremonies or other similar events.

Quiet Technology Incentives

The ATMP incentivizes the use of quiet technology aircraft by commercial air tour operators. Operators that have converted to quiet technology aircraft, or are considering converting to quiet technology aircraft, may request to be allowed to conduct air tours beginning at sunrise or ending at sunset on all days that flights are authorized. Because aviation technology continues to evolve and advance and FAA updates its noise certification standards periodically, the aircraft eligible for this incentive will be analyzed on a case-by-case basis at the time of the operator's request to be considered for this incentive. The NPS will periodically monitor Park conditions and coordinate with FAA to assess the effectiveness of this incentive. If implementation of this incentive results in unanticipated effects on Park resources or visitor experience, further agency action may be required to ensure the protection of Park resources and visitor experience.

Additional ATMP Parameters

- *Route Allocations* – The ATMP authorizes Whirl'd Helicopters, Inc. to fly up to 26 flights on the Black Route (SGTF) and up to 17 flights on the Blue Route (SMSF) per year.
- *Daily Air Tour Allocations* – The ATMP includes restrictions on the number of air tours that the operators may conduct each day. These restrictions provide a maximum number of air tours that may be conducted on Standard Days, but allow for a limited number of Flex Days on which the maximum number of air tours allowed are slightly higher. See Table 1.
- *Hovering* – Aircraft will not hover or loop while conducting air tours over the Park or within ½ mile of the Park boundary.

The following elements of the ATMP are not anticipated to have any environmental effects:

- *Compliance* – The NPS and the FAA are both responsible for the monitoring and oversight of the ATMP. To ensure compliance, operators are required to equip all aircraft used for air tours with flight monitoring technology, use flight monitoring technology during all air tours under the ATMP, and to report flight monitoring data as an attachment to the operator's semi-annual reports.
- *Required Reporting* – The operators are required to submit to the FAA and the NPS semi-annual reports regarding the number of commercial air tours conducted over the Park or within ½ mile of its boundary, and flight monitoring data.
- *Operator Training and Education* – When made available by Park staff, the operators/pilots will take at least one training course per year conducted by the NPS.
- *Annual Meeting* – For the first five years after the signing of the ATMP, the Park staff, the local FAA Flight Standards District Office (FSDO), and all operators will meet once per year to discuss the implementation of the ATMP and any amendments or other changes to the ATMP. Thereafter, this annual meeting will occur if requested by either of the agencies.
- *In-Flight Communication* – For situational awareness when conducting tours of the Park, the operators will utilize frequency 122.9 and report when they enter and depart a route. The pilots should identify their company, aircraft, and route to make any other aircraft in the vicinity aware of their position.
- *Non-transferability of Allocations* – Annual operations under the ATMP are non-transferable.

CE Citation

NPS NEPA Handbook 3.3 A1 (516 DM 12): Changes or amendments to an approved action when such changes will cause no or only minimal environmental impact.

CE Justification

In 2000, Congress passed the National Parks Air Tour Management Act (NPATMA). NPATMA required operators who wish to conduct commercial air tours over national parks to apply to the FAA for authority to

conduct such tours. NPATMA provided for existing commercial air tour operations occurring at the time the law was enacted to continue until an ATMP for the Park was implemented by expressly requiring the FAA to grant interim operating authority (IOA) to existing operators, authorizing them to conduct, on an annual basis, “the greater of (i) the number of flights used by the operator to provide the commercial air tour operations within the 12-month period prior to the date of the enactment of the act, or (ii) the average number of flights per 12-month period used by the operator to provide such operations within the 36-month period prior to such date of enactment, and, for seasonal operations, the number of flights so used during the season or seasons covered by that 12-month period.”² Under NPATMA, the FAA was required to grant IOA for commercial air tours over the Park.³ IOA does not provide any operating conditions (e.g., route, altitudes, time of day, etc.) for commercial air tours other than an annual limit. In 2012, NPATMA was amended, requiring commercial air tour operators to report actual commercial air tours to the FAA and the NPS. IOA granted by the FAA consistent with NPATMA is the approved action for purposes of the CE, as it is a non-discretionary authorization directed by Congress.

Two commercial air tour operators, Great Smoky Mountain Helicopters Inc. and Whirl'd Helicopters, Inc., hold IOA to conduct a combined total of 1,920 commercial air tours over the Park each year.⁴ Based on the three-year average of reporting data from 2017 to 2019, the operators conduct an average of 946 commercial air tours over the Park each year. Great Smoky Mountain Helicopters Inc. conducts an average of 82 commercial air tours over the Park each year⁵, though these tours only fly over the Foothills Parkway area and do not fly over the remainder of the Park, and Whirl'd Helicopters, Inc. conducts an average of 864 commercial air tours over the Park each year. *See Table 2, Reported Commercial Air Tours from 2013-2020.* Reporting data from 2013 and 2014 are considered incomplete as reporting protocols were not fully in place at that time and likely do not reflect actual flights. The agencies consider the 2017-2019, three-year average, which is 946 commercial air tours, the existing commercial air tour operations for the purposes of understanding both the existing number of commercial air tour flights over the Park and impacts from that activity. Flight numbers from a single year were not chosen as the existing condition because the three-year average accounts for both variation across years and takes into account the most recent years prior to the COVID-19 pandemic. In general, the COVID-19 pandemic resulted in atypical commercial air tour operations in 2020, which does not represent the conditions in a typical year. In addition, the year 2021 was not included because the planning and impact analysis for the ATMP occurred before 2021 reporting information was collected and analyzed. Although the approved action (IOA) allowed 1,920 flights annually, the current condition of Park resources and values reflects the impact of an average of 946 flights per year, which represents existing commercial air tour operations. The ATMP sets a maximum of 946 flights per year.

The operators conduct commercial air tours on six different routes within the Park. Whirl'd Helicopters, Inc. conducts commercial air tours on four different routes using BHT-206-B, BHT-206-L1, BHT-206-L3, R-44-44, R-44-II, and R-44-RavenII aircraft (rotorcraft) and Great Smoky Mountain Helicopter, Inc. conducts commercial air tours on two different routes using BHT-206-B aircraft (rotorcraft). All routes flown by both operators are

² 49 U.S.C. § 40128(c)(2)(A)(i-ii).

³ *Id.*

⁴ Notice of Interim Operating Authority Granted to Commercial Air Tour Operators Over National Parks and Tribal Lands Within or Abutting National Parks, 70 Fed. Reg. 36,456 (June 23, 2005).

⁵ In the process of developing the ATMP, the FAA and the NPS reached out to both operators for commercial air tour route information. During this process, the FAA and the NPS identified discrepancies between the route information and reporting information provided by Great Smoky Mountain Helicopter, Inc. The operator was confused as to whether commercial air tours that only flew over the Foothills Parkway or that flew outside the Park but within ½ mile of its boundary were considered commercial air tours over the Park and were thus required to be reported under NPATMA. The agencies determined that the routes that Great Smoky Mountain Helicopter, Inc. provided were in fact commercial air tours as defined by NPATMA and should have been reported as such. The agencies estimate, based upon conversations with the operator, that on average, the operator conducted 82 commercial air tours over the Foothills Parkway area of the Park annually from 2017-2019.

flown between 1,000 ft. and 1,500 ft. AGL. Existing conditions of commercial air tours over the Park are depicted in Figure 2 below.

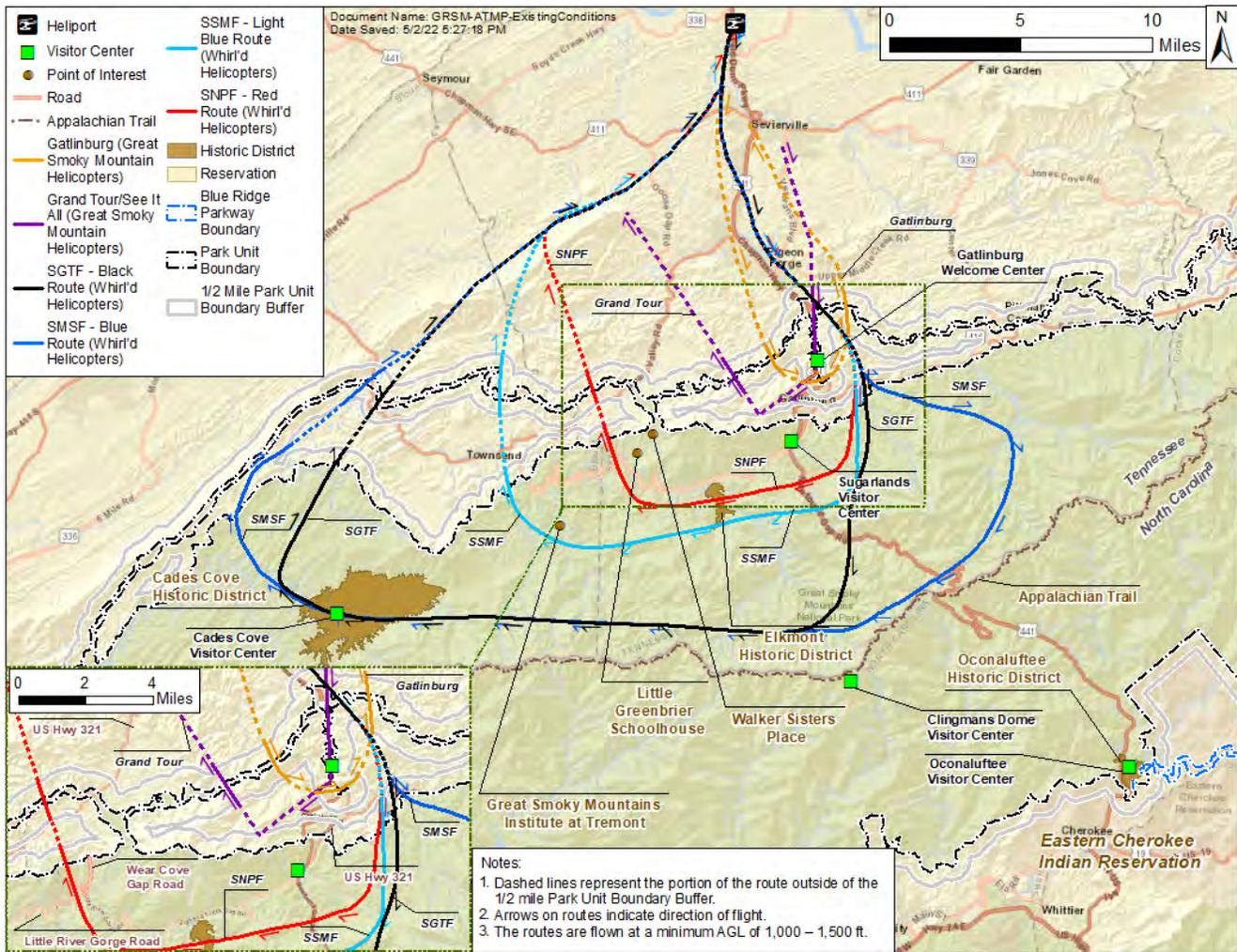


Figure 2. Existing conditions of commercial air tour routes over the Park

The ATMP limits the number of commercial air tours that the operators are authorized to conduct over the Park or within 1/2 mile of its boundary to the existing three-year average of tours conducted from 2017-2019 (946 tours per year). The operators will be allowed to conduct commercial air tours on the existing routes that each operator currently reports flying over the Park, with the modifications described in Section 3.2 of the ATMP, “Commercial Air Tours Routes and Altitudes.” The ATMP authorizes 26 flights per year on the Black Route (SGTF) and 17 flights per year on the Blue Route (SMSF), and restricts the daily number of commercial air tours that each operator may conduct in the form of Standard Days and Flex Days. The ATMP increases the minimum altitude that aircraft may fly over the Park, from a minimum of 1,000 -1,500 ft. AGL to a minimum of 2,600 ft. AGL and prohibits aircraft from hovering or looping while conducting commercial air tours over the Park. The ATMP restricts the hours during which commercial air tours may be conducted over the Park. Commercial air tours using aircraft that do not qualify for the quiet technology incentive may begin two hours after sunrise and must end at least two hours before sunset. The ATMP allows the Park to establish no-fly periods for special events or planned Park management.

Table 2. Reported Commercial Air Tours from 2013-2020

Operator	IOA	2013	2014	2015	2016	2017	2018	2019	2020⁶
Great Smoky Mountain Helicopters Inc. (see footnote 5)	120	19	18	7	0	0	0	1	0
Whirl'd Helicopters, Inc.	1,800	286	610	841	810	838	771	982	1,404
Total	1,920	305	628	848	810	838	771	983	1,404

Consistent with Council on Environmental Quality regulations, the baseline from which to measure environmental impacts of the ATMP is the current condition of the human environment. In this case, the baseline is the current condition of Park resources and values, as impacted by current commercial air tours flown under IOA (between 853 and 1,065 commercial air tours per year, or an average of 946 commercial air tours per year.) Though IOA does not set a minimum altitude or set designated routes, the baseline also includes the route and altitude information provided by the operators, as well as timing and daily air tour information during the years of 2017-2019 as reported by the operators. Environmental impacts or effects are changes to the human environment (natural and physical) from the ATMP.⁷ Because the ATMP is very similar to existing commercial air tour operations and includes new operating parameters designed to improve resource protections and visitor experience, impacts resulting from effects of the ATMP will result in no or only minimal environmental impacts. Under the ATMP, the number of commercial air tours may not increase without an amendment to the ATMP, guaranteeing no greater impacts to the environment will occur without subsequent review consistent with the National Environmental Policy Act (NEPA). An amendment would also be required for a change in the routes beyond that permitted by adaptive management or where the impacts have been already analyzed by the agencies. In addition, the inclusion of mitigating elements including altitude restrictions, time of day restrictions, and quiet aircraft technology incentives will further reduce the impacts of commercial air tours under the ATMP, which will lead to beneficial impacts to the environment compared to current conditions. The use of CE 3.3 A1 is appropriate because environmental impacts resulting from the ATMP will result in no or only minimal changes to the current condition of Park resources and values and impacts will be beneficial compared to current conditions.

Even if impacts of the ATMP were measured against the total number of commercial air tours authorized under IOA for the Park (though such a baseline does not reflect actual commercial air tours conducted over the Park as demonstrated by reported data and is not, therefore, an accurate depiction of the current condition of the human environment) impacts compared to current conditions will be beneficial because the ATMP will set the maximum number of commercial air tours at a level much lower than the maximum number of commercial air tours authorized under IOA and includes mitigating elements noted above. Therefore, even if the analysis were approached from a baseline of IOA, the CE would still be an acceptable NEPA pathway since NEPA is primarily concerned with adverse impacts, not beneficial ones like those that will result from the ATMP. In conclusion, the use of this CE is justified because the changes to the approved action (IOA) from the implementation of the ATMP will result in no or only minimal environmental impacts. The use of the CE is consistent with NEPA.

⁶ Based on unpublished reporting data.

⁷ See 40 C.F.R § 1508.1(g).

Table 3. Extraordinary Circumstances

If implemented, would the proposal...	Yes/No	Notes
A. Have significant impacts on public health or safety?	No	Commercial air tours are subject to the FAA regulations for protecting individuals and property on the ground, and preventing collisions between aircraft, land or water vehicles, and airborne objects. The operators must continue to meet the FAA safety regulations. Therefore, health and safety impacts will not be significant.
B. Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation, or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988); national monuments; migratory birds; and other ecologically significant or critical areas?	No	As noted above, the ATMP authorizes the same number of flights per year as the average number flown from 2017-2019 on substantially the same routes. Therefore, there will be no or minimal change in the potential for impacts compared to current conditions. The route restrictions, minimum altitude requirement, daily flight limitations and time of day restrictions further mitigate any potential adverse impacts and will ensure that no significant adverse environmental effects will occur and that impacts will be beneficial compared to current conditions. <i>See</i> ESF for a full description of the impacts considered.
C. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources (NEPA section 102(2)(E))?	No	<p>There are no highly controversial environmental effects. Impacts from commercial air tours generally are understood from existing modeling and literature and can be accurately projected for Park resources. Information and models used to assess impacts for commercial air tours, as discussed in the <i>ESF</i>, are consistent with peer reviewed literature.</p> <p>Additionally, there are no unresolved conflicts over available resources. This extraordinary circumstance applies to the use or consumption of resources in a way that prohibits another use of the same resource. Commercial air tours do not consume NPS resources. The impacts from tours affect resources but the resources remain present for others to enjoy or appreciate.</p>
D. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?	No	There are no highly uncertain impacts associated with commercial air tours over the Park. The significance of the environmental effects is to be measured by the change from current condition. As noted above, the ATMP authorizes the same number of flights per year as the average number flown from 2017-2019 on substantially the same routes. Therefore, there will be no or minimal impacts compared to current conditions. As also noted above, the minimum altitude requirement, daily flight limitations and time of day restrictions further mitigate any potential adverse impacts and will ensure that no significant adverse environmental effects will occur and that impacts will

		be beneficial compared to current conditions. <i>See</i> ESF for more information.
E. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?	No	The ATMP will not make any decisions in principle about future actions or set a precedent for future action. The NPS and the FAA may choose to amend the ATMP at any time consistent with NPATMA.
F. Have a direct relationship to other actions with individually insignificant, but cumulatively significant, environmental effects?	No	The FAA and the NPS qualitatively considered the cumulative impacts of commercial air tours along with impacts from existing activities described in the ESF. In some cases, the noise contribution from other sources may be substantial, such as the Park's developed areas and roadway traffic. The addition of air tour noise is such a small contribution of noise overall that it is unlikely they would result in noticeable or meaningful change in the overall acoustic environment. Commercial air tours over roadways are likely to be masked by existing noise and therefore the impacts would be <i>de minimis</i> . Finally, the ATMP does not add new noise to the existing acoustic environment and visual impacts associated with aircraft are most noticeable because of noise and have been found to be not significant. Therefore, when considering other sources of noise in the Park that are likely to continue under the ATMP, the continuation of 946 commercial air tours will not result in a meaningful change to the current condition of the visual or auditory landscape at the Park, and no significant cumulative environmental impacts are likely to result from the ATMP. <i>See</i> ESF for more information.
G. Have significant impacts on properties listed or eligible for listing on the National Register of Historic Places, as determined by either the bureau or office?	No	As noted above, the ATMP authorizes the same number of flights as the average number that was flown from 2017-2019 on substantially the same routes. Therefore, there will be no or minimal change in the potential for impacts compared to current condition. The minimum altitude requirement, daily flight limitations and time of day restrictions further mitigate any potential adverse impacts; and will ensure that no significant adverse environmental effects will occur and that impacts will be beneficial compared to current conditions. The authorized level of commercial air tours is not anticipated to adversely affect properties eligible for listing on the National Register of Historic Places. The FAA, as the lead agency and in coordination with NPS, consulted with the State Historic Preservation Offices, Tribal Historic Preservation Offices, federally recognized tribes and other consulting parties to reach this determination pursuant to 36 CFR Part 800. The FAA subsequently concluded that under Section 106 of

		<p>the National Historic Preservation Act, there will be no adverse effects to historic properties from this undertaking. The FAA proposed this finding to all consulting parties via letter dated May 3, 2022. The North Carolina SHPO concurred with the finding of no adverse effect on May 5, 2022. In a letter dated May 19, 2022, the Tennessee SHPO objected to the finding. The Poarch Band of Creek Indians, Catawba Indian Nation, and Cherokee National Forest concurred with the finding of no adverse effects. No other consulting parties objected to the finding.</p> <p>Via letter dated September 6, 2022, the FAA requested that the Advisory Council on Historic Preservation (Council) review its finding. On October 6, 2022, the Council issued an advisory opinion that the FAA appropriately applied the Criteria of Adverse Effect pursuant to 36 CFR § 800.5(a)(1), and provided some recommendations. Via letter dated November 3, 2022, the FAA responded to the Council’s advisory opinion, and explained how the agencies have taken the Council’s recommendations into account, including a change made in the final ATMP. <i>See</i> ESF for more information.</p>
<p>H. Have significant impacts on species listed or proposed to be listed on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species?</p>	<p>No</p>	<p>As noted above, the ATMP authorizes the average number of flights that were flown from 2017-2019 on substantially the same routes. Therefore, there will be no or minimal change in the potential for impacts compared to current conditions. The minimum altitude requirement, daily flight limitations and time of day restrictions further mitigate any potential adverse impacts, and will ensure that no significant adverse environmental effects will occur and that impacts will be beneficial compared to current conditions. After analyzing potential effects on listed species and conducting informal consultation with the U.S. Fish and Wildlife Service, the agencies determined the ATMP <i>may affect, but is not likely to adversely affect</i> the Indiana bat, northern long-eared bat, tri-colored bat, little brown bat, or the Carolina northern flying squirrel. The U.S. Fish and Wildlife Service concurred with this determination on April 27, 2022. Therefore, there is no potential for significant impacts to any listed species associated with the commercial air tour activity proposed in the ATMP. <i>See</i> ESF for more information.</p>
<p>I. Violate a federal, state, local or tribal law or requirement imposed for the protection of the environment?</p>	<p>No</p>	<p>The ATMP will comply with all applicable federal, state, local and tribal laws. <i>See</i> ESF for more information.</p>

J. Have a disproportionately high and adverse effect on low income or minority populations (EO 12898)?	No	The ATMP will not have a disproportionate effect on low income or minority populations. <i>See</i> ESF for more information.
K. Limit access to and ceremonial use of Indian sacred sites on federal lands by Indian religious practitioners or adversely affect the physical integrity of such sacred sites (EO 130007)?	No	The ATMP will not limit access to or change ceremonial use of Indian sacred sites on federal lands in any way. Sacred ceremonies or other tribal activities which occur without notice to the NPS may be interrupted by noise, however, commercial air tours have no effect on tribal access. Additionally, the ATMP does not involve any ground disturbing or other activities that would adversely affect the physical integrity of sacred sites. <i>See</i> ESF for more information.
L. Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112)?	No	The ATMP does not involve any ground disturbance or other activities with the potential to contribute to the introduction, continued existence, spread, growth, or expansion of invasive or exotic species in the Park.

Decision

I find that the action fits within the categorical exclusion above. Therefore, I am categorically excluding the described project from further NEPA analysis. No extraordinary circumstances apply.

Signature

**CASSIUS
CASH**

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CASSIUS CASH
Date: 2022.11.23
09:29:08 -05'00'

Cassius M. Cash
Superintendent
Great Smoky Mountains National Park
National Park Service

Date

APPENDIX D

FAA Categorical Exclusion Adoption



Federal Aviation Administration

Adoption of the Categorical Exclusion Determination by the National Park Service for the Great Smoky Mountains National Park Air Tour Management Plan.

The National Parks Air Tour Management Act (NPATMA) requires that all commercial air tour operators conducting or intending to conduct a commercial air tour operation over a unit of the National Park System apply to the Federal Aviation Administration (FAA) for authority to undertake such activity. 49 U.S.C. § 40128(a)(2)(A). NPATMA, as amended, further requires the FAA, in cooperation with the National Park Service (NPS), to establish an Air Tour Management Plan (ATMP) or voluntary agreement for each park that did not have such a plan or agreement in place at the time the applications were made, unless a park has been exempted otherwise from this requirement. 49 U.S.C. § 40128(b)(1)(A).

The FAA and the NPS are proposing to implement the ATMP for Great Smoky Mountains National Park (Park), in accordance with NPATMA, as amended, its implementing regulations (14 Code of Federal Regulations (CFR) Part 136), and all other applicable laws and policies. This document memorializes the FAA's adoption of the NPS determination that its categorical exclusion (CATEX) covers the scope of its proposed action.

1. Regulatory Framework

The Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA), 40 CFR Parts 1500-1508, require an agency wishing to apply a CATEX identified in its agency NEPA procedures to first make a determination that the CATEX covers the proposed action and to "evaluate the action for extraordinary circumstances in which a normally excluded action may have a significant effect." 40 CFR § 1501.4(b). If the agency determines that no extraordinary circumstances exist or that "there are circumstances that lessen the impacts or other conditions sufficient to avoid significant effects," the agency may categorically exclude the proposed action. 40 CFR §1501.4(b)(1).

Section 1506.3(a) of the CEQ regulations authorizes agencies to adopt other agencies' NEPA documents under certain conditions, while section 1506.3(d) of the regulations applies specifically to the adoption of other agencies' CATEX determinations and reads as follows:

An agency may adopt another agency's determination that a categorical exclusion applies to a proposed action if the action covered by the original categorical exclusion determination and the adopting agency's proposed action are substantially the same. The agency shall document the adoption.

40 CFR § 1506.3(d). This document has been prepared to comply with that Regulation.

2. The NPS's Proposed Action

The NPS's proposed action is to implement an ATMP for the Park. The ATMP includes operating parameters to mitigate impacts from commercial air tours on Park resources, which are described in the NPS Categorical Exclusion Documentation Form attached to the Record of Decision (ROD) as Appendix C.

3. FAA's Proposed Action

Like the NPS, the FAA's Proposed Action is to implement the ATMP for the Park subject to the operating parameters described in the NPS Categorical Exclusion Documentation Form (see Appendix C of the ROD). In addition, the FAA will update the operations specifications (OpSpecs) for the air tour operators to incorporate the terms and conditions of the ATMP accordingly.

4. Scope of Applicable CATEX and the NPS Extraordinary Circumstances Analysis

For its proposed action, the NPS has applied the Categorical Exclusion from the NPS NEPA Handbook 3.3 A1 (516 DM 12): "Changes or amendments to an approved action when such changes will cause no or only minimal environmental impact."

Per 40 CFR § 1501.4(b), an agency must first determine that the categorical exclusion identified in its agency NEPA procedures covers the proposed action. In this case, the NPS states as follows:

In 2000, Congress passed the National Parks Air Tour Management Act (NPATMA). NPATMA required operators who wish to conduct commercial air tours over national parks to apply to the FAA for authority to conduct such tours. NPATMA provided for existing commercial air tour operations occurring at the time the law was enacted to continue until an ATMP for the Park was implemented by expressly requiring the FAA to grant interim operating authority (IOA) to existing operators, authorizing them to conduct, on an annual basis, "the greater of (i) the number of flights used by the operator to provide the commercial air tour operations within the 12-month period prior to the date of the enactment of the act, or (ii) the average number of flights per 12-month period used by the operator to provide such operations within the 36-month period prior to such date of enactment, and, for seasonal operations, the number of flights so used during the season or seasons covered by that 12-month period." Under NPATMA, the FAA issued IOA for commercial air tours over the Park. IOA does not provide any operating conditions (e.g., route, altitudes, time of day, etc.) for commercial air tours other than an annual limit. In 2012, NPATMA was amended, requiring commercial air tour operators to report actual commercial air tours to the FAA and the NPS. IOA issued by the FAA consistent with NPATMA is the approved action for purposes of the CE, as it is a non-discretionary authorization directed by Congress.

...The use of CE 3.3 A1 is appropriate because environmental impacts resulting from the ATMP will result in no or only minimal changes to the current condition of Park resources and values and impacts will be beneficial compared to current conditions.

For a complete discussion of the NPS's justification for using the above-noted CE, *see* the NPS's Categorical Exclusion Documentation Form, attached to the ROD as Appendix C.

Section 1501.4(b) of the CEQ regulations requires an agency seeking to categorically exclude a proposed action to "evaluate the action for extraordinary circumstances in which a normally excluded action may have a significant effect." The NPS confirms it has performed an appropriate extraordinary

circumstances analysis. See the NPS's Categorical Exclusion Documentation Form, attached to the ROD as Appendix C, and the NPS's Environmental Screening Form, attached to the ROD as Appendix B.

5. FAA's "Substantially the Same Action" Determination

As noted above, the CEQ Regulations provide that an agency "may adopt another agency's determination that a categorical exclusion applies to a proposed action **if the action covered by the original categorical exclusion determination and the adopting agency's proposed action are substantially the same.**" 40 CFR § 1506.3(d) (emphasis added). Thus, in order to adopt the NPS's CATEX determination, the FAA must conclude that its proposed action and the NPS's Proposed Action are "substantially the same."

In the preamble to the final amended regulations, CEQ stated:

The final rule provides agencies the flexibility to adopt another agency's determination that a [CATEX] applies to an action when the actions are substantially the same to address situations where a proposed action would result in a [CATEX] determination by one agency and an EA and FONSI by another agency.

85 Fed. Reg. 43304, 43336 (July 16, 2020).

In this case, the FAA has been directed by Congress to implement an ATMP for the Park in cooperation with the NPS. The proposed action is an action to be taken jointly by both agencies, as NPATMA requires. Therefore, the proposed actions of the agencies are necessarily substantially the same and any reasonably foreseeable changes to the human environment arising from the NPS's implementation of the proposed action are identical to those that would arise from the FAA's proposed action. While the FAA's action also includes updating the operators' OpSpecs, the update would simply further require the operators to comply with the terms and conditions contained in the ATMP and would not result in any impacts beyond those that could result from implementation of the ATMP itself. Accordingly, the FAA determines that the NPS's Proposed Action and FAA's Proposed Action are substantially the same.¹

6. FAA's Extraordinary Circumstances Analysis

Extraordinary circumstances are factors or circumstances in which a normally categorically excluded action may have a significant environmental impact that then requires further analysis in an EA or an EIS. For FAA proposed actions, extraordinary circumstances exist when the proposed action: (1) involves any of the circumstances described in paragraph 5-2 of FAA Order 1050.1F; and (2) may have a significant impact. See FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, section 5-2.

The most potentially relevant circumstances listed in paragraph 5-2 of FAA Order 1050.1F are as follows:²

¹ Updating the operators' OpSpecs is also independently subject to an FAA CATEX covering "Operating specifications and amendments that do not significantly change the operating environment of the airport." FAA Order 1050.1F, § 5-6.2(d).

² Section 5-2(b)(10) of FAA Order 1050.1F includes a circumstance reading "[i]mpacts on the quality of the human environment that are likely to be highly controversial on environmental grounds" and explains that "[t]he term 'highly controversial on environmental grounds' means there is a substantial dispute involving reasonable disagreement over the degree, extent, or nature of a proposed action's environmental impacts or over the action's risks of causing environmental harm. Mere opposition is not sufficient for a proposed action or its impacts to be considered highly controversial on environmental grounds." The 2020 updates to the CEQ regulations eliminated

- An adverse effect on cultural resources protected under the National Historic Preservation Act (*see* ROD Appendix F);
- An impact on properties protected under Section 4(f) of the Department of Transportation Act;
- An impact on natural, ecological, or scenic resources of Federal, state, tribal, or local significance (e.g., federally listed or proposed endangered, threatened, or candidate species, or designated or proposed critical habitat under the Endangered Species Act) (*see* ROD Appendix E);
- An impact on national marine sanctuaries or wilderness areas;
- An impact to noise levels at noise sensitive areas;
- An impact on air quality or violation of Federal, state, tribal, or local air quality standards under the Clean Air Act; and
- An impact on the visual nature of surrounding land uses.

In support of this adoption, the FAA performed its own extraordinary circumstances analysis to ensure that a CATEX was the appropriate level of environmental review and adoption of the NPS's CATEX determination was permissible. The FAA evaluated each of its extraordinary circumstances to determine if any would have the potential for significant impacts and determined that no extraordinary circumstances exist. *See* Documentation of FAA's Extraordinary Circumstances Analysis for the Park, attached as Exhibit 1.

7. Section 4(f) of the Department of Transportation Act

Section 4(f) of the Department of Transportation Act (codified at 49 U.S.C. § 303(c)), states that, subject to exceptions for *de minimis* impacts:

... the Secretary may approve a transportation program or project...requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if –

1. There is no prudent and feasible alternative to using that land; and
2. The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

The term “use” refers to both direct (physical) and indirect (constructive) impacts to Section 4(f) resources. A physical use involves the physical occupation or alteration of a Section 4(f) resource, while constructive use occurs when a proposed action results in substantial impairment of a resource to the degree that the activities, features, or attributes of the resource that contribute to its significance or enjoyment are substantially diminished. Under the ATMP, potential impacts to Section 4(f) resources from commercial air tours may include noise from aircraft within the acoustic environment, as well as visual impacts.

To comply with Section 4(f) and as part of its extraordinary circumstances analysis, the FAA prepared a 4(f) analysis, which is attached as Exhibit 2, and determined that there would be no use of any 4(f) resource associated with the implementation of the proposed action. As part of this analysis, the FAA

the “intensity” factor on which this circumstance is based. The FAA nevertheless considered this factor in its extraordinary circumstances analysis for disclosure purposes and to the extent relevant.

consulted with Officials with Jurisdiction of 4(f) resources in the study area. Further information about those consultations is included in Exhibit 2.

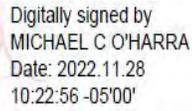
8. Attachments:

The FAA prepared this document on review and contemplation of the documents appended to the ROD in addition to the following documents, which are attached hereto:

- Exhibit 1: Documentation of FAA Extraordinary Circumstances Analysis
- Exhibit 2: FAA Section 4(f) Analysis for Great Smoky Mountains National Park

9. Adoption Statement

In accordance with 40 CFR § 1506.3(d), the FAA hereby finds that the NPS's and FAA's proposed actions are substantially the same, that no extraordinary circumstances exist, and that adoption of the NPS's CATEX determination is otherwise appropriate. Accordingly, the FAA hereby adopts the NPS's CATEX determination.

Approved: MICHAEL C O'HARRA  Digitally signed by
MICHAEL C O'HARRA
Date: 2022.11.28
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Date: _____

Michael C. O'Harra, Regional Administrator
Southern Region
Federal Aviation Administration

EXHIBIT 1

Documentation of FAA Extraordinary Circumstances Analysis

**The Federal Aviation Administration’s Extraordinary Circumstance Analysis
For Great Smoky Mountains National Park
Air Tour Management Plan (ATMP)**

Extraordinary Circumstance	Yes	No	Notes
1. Is the action likely to have an adverse effect on cultural resources protected under the National Historic Preservation Act of 1966, as amended?			<p>The Federal Aviation Administration (FAA), in coordination with the National Park Service (NPS), consulted with the Tennessee and North Carolina State Historic Preservation Offices (SHPO), Native American tribes, and other consulting parties on the potential impacts of the ATMP on Historic Properties, including cultural landscapes. The FAA made a finding that the air tour management plan (ATMP) will have no adverse effect on historic properties. The FAA proposed this finding to all consulting parties via letter dated May 3, 2022. The North Carolina SHPO concurred with the finding of no adverse effect on May 5, 2022. In a letter dated May 19, 2022, the Tennessee SHPO objected to the finding. The Poarch Band of Creek Indians, Catawba Indian Nation, and Cherokee National Forest concurred with the finding of no adverse effects. No other consulting parties objected to the finding.</p> <p>✓ The FAA continued consultation with the Tennessee SHPO to resolve the SHPO’s disagreement with the FAA’s finding of no adverse effect but could not come to a resolution. Via letter dated September 6, 2022, the FAA requested that the Advisory Council on Historic Preservation (Council) review its finding. The FAA concurrently notified all consulting parties of its request and made this letter available to the public. On October 6, 2022, the Council issued an advisory opinion finding that the FAA appropriately applied the Criteria of Adverse Effect pursuant to 36 CFR § 800.5(a)(1), citing measures in the ATMP that “avoid adverse effects by reducing the effects of past conditions,” and providing some recommendations. Via letter dated November 3, 2022, the FAA responded to the Council’s advisory opinion, and explained how the agencies have taken the Council’s recommendations into account, including a change made in the final ATMP.</p> <p>See Section 106 documentation (Appendix F of ROD) for more information.</p>
2. Is the action likely to have an impact on properties protected under Section 4(f) of the Department of Transportation Act?		✓	<p>The ATMP limits the number of commercial air tours to 946 tours per year and maintains substantially same routes as are currently flown under existing conditions. Overall, noise impacts associated with commercial air tours over the Park are not expected to measurably change, since the ATMP authorizes the same number of flights per year as</p>

Extraordinary Circumstance	Yes	No	Notes
			<p>the average number of flights from 2017-2019, requires commercial air tours to maintain the substantially same routes,” and increases altitudes as compared to existing conditions. Refer to the <i>Noise Technical Analysis</i> in the environmental screening form (ESF). For purposes of assessing noise impacts from commercial air tours on the acoustic environment of the Park under the National Environmental Policy Act (NEPA), the FAA noise evaluation is based on Yearly¹ Day Night Average Sound Level (Ldn or DNL); the cumulative noise energy exposure from aircraft over 24 hours. The DNL analysis indicates that the ATMP will not result in any noise impacts that would be “significant” or “reportable” under FAA’s policy for NEPA. In addition, visual impacts to Section 4(f) resources will be similar to impacts currently occurring because the number of authorized flights under the ATMP will be the same as the average number of flights from 2017-2019, and routes will remain similar as compared to existing conditions with modifications described in Section 3.2 of the ATMP. After consulting with officials with jurisdiction over appropriate 4(f) resources, the FAA has determined that the ATMP will not result in substantial impairment of Section 4(f) resources; therefore, no constructive use of a Section 4(f) resource associated with the ATMP will occur. See Section 4(f) analysis.</p>
<p>3. Is the action likely to have an impact on natural, ecological, or scenic resources of Federal, state, tribal or local significance?</p>		<p>✓</p>	<p>The ATMP limits the number of commercial air tours to 946 tours per year and maintains substantially the same routes as are currently flown under existing conditions. Therefore, impacts to viewsheds will be similar to impacts currently occurring because the number of authorized flights under the ATMP will be the same as the average number of flights from 2017-2019 and the routes will remain substantially the same as compared to existing conditions. Furthermore, since altitudes will increase as compared to existing conditions and therefore visitors are less likely to notice overflights, the ATMP is expected to result in beneficial impacts to viewsheds compared to current conditions. Therefore, the ATMP will not impact scenic resources.</p> <p>The FAA and NPS determined the ATMP <i>may affect, but is not likely to adversely affect</i> Carolina northern flying</p>

¹ As required by FAA policy, the FAA typically represents yearly conditions as the Average Annual Day (AAD). However, because ATMP operations in the park occur at low annual operational levels and are highly seasonal in nature FAA determined that a peak day representation of the operations would more adequately allow for disclosure of any potential impacts. A peak day has therefore been used as a conservative representation of assessment of AAD conditions required by FAA policy.

Extraordinary Circumstance	Yes	No	Notes
			squirrel, northern long-eared bat, Indiana bat, tri-colored bat, and little brown bat. The USFWS concurred with this determination on April 27, 2022. See Section 7 correspondence.
4. Is this action likely to have an impact on the following resources:			
Resources protected by the Fish and Wildlife Coordination Act		✓	The ATMP will not result in the control or modification of a natural stream or body of water. Therefore, no resources protected by the Fish and Wildlife Coordination Act will be impacted.
Wetlands		✓	While wetlands are present within the project area, the ATMP will not result in ground disturbance or fill. Therefore, no impacts to wetlands will occur.
Floodplains		✓	While floodplains are present within the project area, the ATMP will not result in ground disturbance or fill. Therefore, no impacts to floodplains will occur.
Coastal zones		✓	No coastal zones are located within the Park or its ½-mile boundary.
National marine sanctuaries		✓	No national marine sanctuaries are located within the Park or its ½-mile boundary.
Wilderness areas		✓	Approximately 89% of the Park is recommended or proposed wilderness. Because commercial air tours do not land in wilderness or parks, the undeveloped quality of wilderness will be maintained. Because the ATMP authorizes the same number of commercial air tours as the average number of flights from 2017-2019, and the substantially same routes will be used, impacts to solitude and the natural quality of wilderness character will be similar or decrease compared to impacts currently occurring.
National Resource Conservation Service-designated prime and unique farmlands		✓	The ATMP will not result in ground disturbance. Therefore, the project will not impact designated prime and unique farmlands.
Energy supply and natural resources		✓	The ATMP will not affect energy supplies or natural resources.
Resources protected under the Wild and Scenic Rivers Act and rivers, or river segments listed on the Nationwide Rivers Inventory (NRI)		✓	No wild and scenic rivers are located within the Park.
Solid waste management		✓	The ATMP will not result in the generation of solid waste, construction, or demolition debris.

Extraordinary Circumstance	Yes	No	Notes
5. Is the action likely to cause a division or disruption of an established community, or a disruption of orderly, planned development, or an inconsistency with community plans or goals?		✓	The ATMP will not disrupt communities or development plans or goals.
6. Is the action likely to cause an increase in surface transportation congestion?		✓	The ATMP will not cause an increase in surface transportation congestion.
7. Is the action likely to have an impact on noise levels in noise-sensitive areas?		✓	Overall, noise impacts associated with commercial air tours over the Park are not expected to measurably change, since the ATMP authorizes the same number of flights per year as the average number of flights from 2017-2019 on the substantially same routes, and requires commercial air tours to fly at increased altitudes as compared to those flown under existing conditions. Refer to the <i>Noise Technical Analysis</i> in the ESF. For purposes of assessing noise impacts from commercial air tours on the acoustic environment of the Park under NEPA, the FAA noise evaluation is based on Yearly Day Night Average Sound Level (Ldn or DNL); the cumulative noise energy exposure from aircraft over 24 hours. The DNL analysis indicates that the undertaking will not result in any noise impacts that would be “significant” or “reportable” as defined in FAA Order 1050.1F.
8. Is the action likely to have an impact on air quality or violate Federal, state, tribal, or local air quality standards under the Clean Air Act?		✓	The findings from the air quality screening analysis demonstrate that implementing the ATMP will not meaningfully impact local air quality and will not have regional impacts from implementation of the ATMP in the Park. See <i>Air Quality Technical Analysis</i> in the ESF.
9. Is the action likely to have an impact on water quality, aquifers, public water supply systems, or state or tribal water quality standards under the Clean Water Act or the Safe Drinking Water Act?		✓	The ATMP will not result in ground disturbance or other activities that will impact water quality, aquifers, public water supply systems, or water quality standards under the Clean Water Act or Safe Drinking Water Act.
10. Is the action likely to be highly controversial on environmental grounds?		✓	There are no highly controversial environmental effects. The term “highly controversial on environmental grounds” means there is a substantial dispute involving reasonable

Extraordinary Circumstance	Yes	No	Notes
			<p>disagreement over the degree, extent, or nature of a proposed action’s environmental impacts or over the action’s risks of causing environmental harm. Mere opposition is not sufficient for a proposed action or its impacts to be considered highly controversial on environmental grounds. See FAA Order 1050.1F 5-2(b)(10)². Impacts from commercial air tours generally are understood from existing modeling and literature and can be accurately projected for Park resources. Information and models used to assess impacts for commercial air tours, as discussed in the NPS categorical exclusion (CE)/ESF, is consistent with peer reviewed literature. Therefore, the ATMP will not result in substantial dispute involving reasonable disagreement over the degree, extent, or nature of the environmental impacts or the risk of causing environmental harm.</p>
<p>11. Is the action likely to be inconsistent with any Federal, State, Tribal, or local law relating to the environmental aspects of the project?</p>		<p>✓</p>	<p>The ATMP will be consistent with all applicable Federal, State, tribal, and local law.</p>
<p>12. Is the action likely to directly, indirectly, or cumulatively create a significant impact on the human environment?</p>		<p>✓</p>	<p>The FAA and NPS qualitatively considered the cumulative impacts of commercial air tours along with impacts from existing activities described in the NPS CE/ESF. In some cases, the noise contribution from other sources may be substantial, such as roadway traffic, high altitude jets, private aviation, or military overflights. The addition of air tour noise is such a small contribution of noise overall that it is unlikely they would result in noticeable or meaningful change in the acoustic environment. Commercial air tours over roadways or developed areas are likely to be masked by existing noise and therefore the impacts would be de minimis. Finally, the ATMP does not add new noise to the existing acoustic environment. Therefore, when considering other sources of noise in the Park that are likely to continue under the ATMP, the continuation of 946 commercial air tours will per year not result in a meaningful change to the current condition of the visual or auditory landscape at the Park.</p>

**Extraordinary circumstances exist when the proposed action (1) involves any of the listed circumstances, and (2) may have significant impacts (FAA Order 1050.1F para. 5-2 and 40 CFR § 1508.4). See also FAA Order 1050.1F Desk Reference for a more detailed description of the analysis for each extraordinary circumstance.*

² The 2020 updates to the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA eliminated the “intensity” factor on which this circumstance is based. It is nevertheless included for disclosure purposes and to the extent relevant.

EXHIBIT 2

FAA Section 4(f) Analysis for Great Smoky Mountains National Park

Section 4(f) Analysis in FAA Adoption Document

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Introduction

The Federal Aviation Administration (FAA) prepared this document to analyze and evaluate the Proposed Action’s potential impacts to resources protected under Section 4(f) of the U.S. Department of Transportation Act (Section 4(f)). The Proposed Action is to implement an Air Tour Management Plan (ATMP) at Great Smoky Mountains National Park (the Park). As land acquisition, construction, or other ground disturbance activities would not occur under the ATMP, the Proposed Action would not have the potential to cause a direct impact to a Section 4(f) resource. Therefore, analysis of potential impacts to Section 4(f) resources is limited to identifying impacts that could result in a constructive use. Section 4(f) is applicable to historic sites and publicly owned parks, recreation areas, and wildlife and waterfowl refuges of national, state, or local significance that may be impacted by transportation programs or projects carried out by the U.S. Department of Transportation (USDOT) and its operating administrations, including the FAA.

This document describes Section 4(f) regulations and requirements, the study area for Section 4(f), the process used to identify Section 4(f) resources in the study area, and consideration of potential impacts that could result in substantial impairment to Section 4(f) resources in the study area.

Regulatory Context

Section 4(f) of the Department of Transportation Act (codified at 49 U.S.C. § 303(c)), states that, subject to exceptions for *de minimis* impacts:

“... the Secretary may approve a transportation program or project...requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if –

1. There is no prudent and feasible alternative to using that land; and
2. The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.”

The term “use” refers to both direct (physical) and indirect (constructive) impacts to Section 4(f) resources. A physical use involves the physical occupation or alteration of a Section 4(f) resource, while constructive use occurs when a proposed action results in substantial impairment of a resource to the degree that the activities, features, or attributes of the resource that contribute to its significance or enjoyment are substantially diminished. Under the ATMP, potential impacts to Section 4(f) resources from commercial air tours may include noise from aircraft within the acoustic environment, as well as visual impacts.

The FAA uses procedures in FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*¹ for meeting Section 4(f) requirements. Federal Highway Administration/Federal Transit Administration regulations and policy are not binding on the FAA; however, the FAA may use them as guidance to the extent relevant to aviation projects.² The FAA requires consideration of noise impacts for proposed changes in air traffic procedures or airspace redesign across a study area which may extend vertically from the surface to 10,000 feet above ground level (AGL).³ The land use compatibility guidelines in 14 CFR Part 150 assist with determining whether a proposed action would constructively use a Section 4(f) resource. These guidelines rely on the Day Night Average Sound level (DNL), which is considered the best measure of impacts to the quality of the human environment from exposure to noise.

The FAA acknowledges that the land use categories in 14 CFR Part 150 may not be sufficient to determine the noise compatibility of Section 4(f) properties (including, but not limited to, noise sensitive areas within national parks and wildlife refuges), where a quiet setting is a generally recognized purpose and attribute. The FAA has consulted with the National Park Service (NPS) and included supplemental noise metrics in the Section 4(f) analysis for the ATMP (see Modeling Noise Impacts below).

Section 4(f) is applicable to all historic sites of national, State, or local significance, whether or not they are publicly owned or open to the public. Except in unusual circumstances, Section 4(f) protects only those historic sites that are listed or eligible for inclusion on the National Register of Historic Places (NRHP).⁴ Historic sites are normally identified during the process required under Section 106 of the National Historic Preservation Act. Section 4(f) is not applicable to privately owned parks, recreation areas, and wildlife and waterfowl refuges.

Section 4(f) Resources

The study area for considering Section 4(f) resources for the ATMP consists of the commercial air tour route over the Park and a half-mile outside the boundary of the Park, plus an additional buffer of four miles extending from either side of the centerline of the air tour route (the buffer is a total of eight miles

¹ Federal Aviation Administration. 2015. 1050.1F - *Environmental Impacts: Policies and Procedures*. Also see 1050.F Desk Reference (Version 2, February 2020).

² See 1050.1F Desk Reference, Section 5-3.

³ Department of Transportation, Federal Aviation Administration, Order 1050.1F, *Environmental Impacts: Policies and Procedures*, Appendix B. Federal Aviation Administration Requirements for Assessing Impacts Related to Noise and Noise-Compatible Land Use and Section 4(f) of the Department of Transportation Act (49 U.S.C. § 303), Para. B-1.3, Affected Environment. July 16, 2015.

⁴ If a historic site is not NRHP-listed or eligible, a State or local official may formally provide information to FAA to indicate that a historic site is locally significant. The responsible FAA official may then determine it is appropriate to apply Section 4(f). See FAA Order 1050.1F and the 1050.1F Desk Reference, for further detail.

wide). The study area for Section 4(f) resources also corresponds with the Area of Potential Effects (APE) used for compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966 (Section 106) for the Park. See Figure 1 for a depiction of the Section 4(f) study area. Historic properties were identified as part of the Section 106 consultation process. Parks, recreational areas, and wildlife and waterfowl refuges were identified using public datasets from Federal, State, and local sources, which included the Tennessee Department of Environment and Conservation. Each resource that intersected the study area (i.e., some portion of the property occurs within the buffer around the route) was included in the Section 4(f) analysis.

Table 1 lists Section 4(f) historic sites, Table 2 shows Section 4(f) parks and recreational areas, and Table 3 shows wildlife and waterfowl refuges identified in the study area.⁵

⁵ All data sources were accessed the week of March 21, 2022.

Section 4(f) Study Area and Properties for ATMP at Great Smoky Mountains National Park

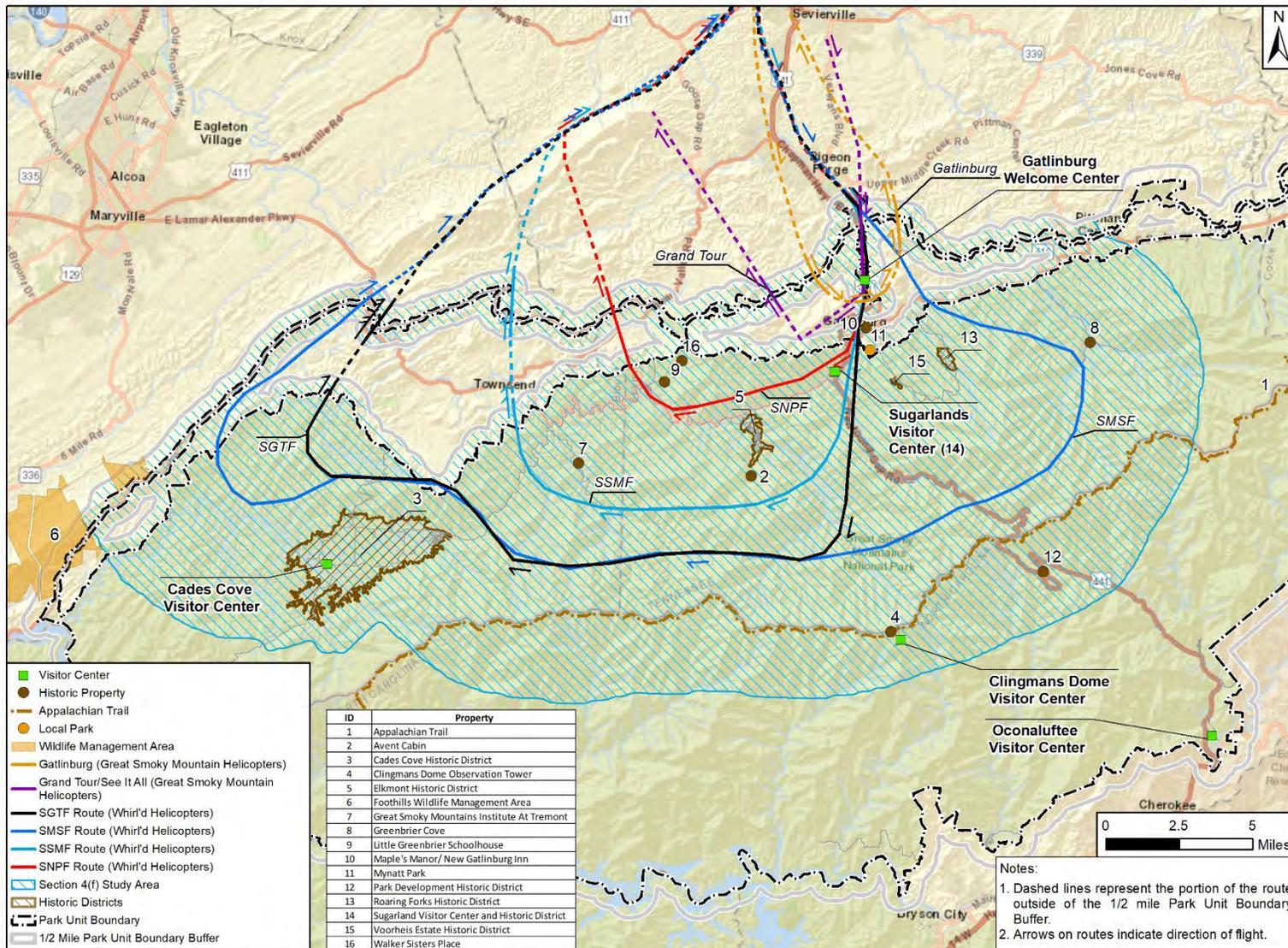


Figure 1 shows a map of all Section 4(f) resources within the study area.⁶

Table 1. Section 4(f) historic sites within the study area

Property Name	Official(s) with Jurisdiction	Property Type	Eligibility Status	Significant Characteristics
Appalachian Trail	NPS, State Historic Preservation Officer (SHPO)	Landscape	Eligible	The Appalachian Trail is a significant cultural landscape that reveals the history of human use and settlement along the Appalachian Mountain range and the resulting distinct regional traditions. Visitors to the trail have the unique opportunity to interact with the communities and resources representing diverse eras in U.S. history and pre-history.
Avent Cabin	NPS, SHPO	Building	Listed	The cabin is the last surviving example of this property type on the banks of Jakes Creek. Significant characteristics of the building include its single-pen design and use of logs as a construction material.
Cades Cove Historic District	NPS, SHPO	District	Listed	Cades Cove Historic District is significant as an intact example of a community that valued traditional agricultural practices. The buildings within the district reflect the materials, skills, and needs of the people that first inhabited them. Buildings are situated close to the fields of the farms, water, and other resources needed to support life in a frontier area. Though many buildings have been relocated or reconstructed, great care has been taken to preserve the architectural form, materials, and appearance.
Clingmans Dome Observation Tower	NPS, SHPO	Structure	Listed	Modern architecture, which broke away from the long-standing “rustic” style of the National Park Service. In is additionally significant as a representation of the National Park Service’s Mission 66 program.
Clingmans Dome TCP	NPS, SHPO	Traditional Cultural Property	Eligible	Identified by Eastern Band of Cherokee Indians as significant.

⁶ In order to protect resources and confidentiality, Traditional Cultural Properties, archeological sites, and other sensitive sites are not displayed on Figure 1.

Property Name	Official(s) with Jurisdiction	Property Type	Eligibility Status	Significant Characteristics
Elkmont Historic District	NPS, SHPO	District	Listed	The district is significant as the only remaining collection of early 20 th century resort cabins retaining integrity in the Appalachian Mountains of Tennessee. It is also significant as representative of rustic or vernacular architecture of the early 20 th century. The historic district contains 32 contributing properties.
Great Smoky Mountains Institute at Tremont	NPS, SHPO	Building	Eligible	The Great Smoky Mountains Institute was constructed on the site of a logging camp. It was established in the early 1960s as a Job Corps Center and between 1969 and 1979 operated as the Tremont Environmental Education Center in a partnership between Maryville College and the National Park Service. The buildings are representative of the National Park Service’s Mission 66 program.
Little Greenbrier Schoolhouse	NPS, SHPO	Building	Listed	Little Greenbrier School House is significant as an example of a late 19 th century schoolhouse and church in rural Tennessee. It is additionally significant as an example of architecture associated with the practice of Primitive Baptism.
Park Development Historic District	NPS, SHPO	District	Eligible	The Park Development Historic District encompasses the original automobile circulation system and major developed areas accessed in Great Smoky Mountains National Park during the period of significance from 1933 to 1942
Walker Sisters Place	NPS, SHPO	Building Complex	Listed	The Walker Sisters’ Place is significant as a late-period example of a traditional homestead within Great Smoky Mountains National Park. The agricultural complex features a variety of nineteenth century agricultural outbuildings that remained in continuous use through the middle of the twentieth century.
Roaring Forks Historic District	NPS, SHPO	District	Listed	The valley of the Roaring Fork is significant for its collection of late 19 th and early 20 th century agricultural buildings set within the extremely narrow, rock-strewn hollow.

Property Name	Official(s) with Jurisdiction	Property Type	Eligibility Status	Significant Characteristics
Sugarland Visitor Center and Historic District	NPS, SHPO	District	Eligible	The valley of the Roaring Fork is significant for its collection of late 19 th and early 20 th century agricultural buildings set within the extremely narrow, rock-strewn hollow.
Voorheis Estate Historic District	NPS, SHPO	Cultural Landscape	Eligible	The 38-acre site encompasses the former mountain retreat developed by Lois E. Voorheis between 1928 and 1944. The estate is an example of rustic style of architecture and landscape architecture which is evident in the form of structures, designed water features, and the intentional use of natural materials.
Greenbrier Cove	NPS, SHPO	Structure	Eligible	Identified by “A Walk in the Woods.” The Greenbrier Area consists of significant historic resources that help share the story of early mountain settlements within the boundaries of the Park. The Greenbrier Area consists of numerous cemeteries, rock walls, chimneys, and a few preserved cabins and outbuildings.
Maple’s Manor / New Gatlinburg Inn	NPS, SHPO	Building	Listed	Maples Manor/New Gatlinburg Inn is locally significant and eligible under Criterion C for architecture.

Table 2. Section 4(f) parks and recreational resources in the study area

Property Name	Official(s) with Jurisdiction	Description	Approximate Size
Mynatt Park	City of Gatlinburg	Local park minutes from the downtown district of Gatlinburg. Includes walking paths, a fishing creek, playground, pavilion, and sports courts.	9 acres (entirely in study area)

Table 3. Section 4(f) wildlife and waterfowl refuges in the study area

Property Name	Official(s) with Jurisdiction	Description	Approximate Size
Foothills Wildlife Management Area	Tennessee Wildlife Resources Agency	The Foothills WMA has 10,000 acres of wildlife management area with attractions	10,000 acres (437 acres in study area)

Property Name	Official(s) with Jurisdiction	Description	Approximate Size
		including bear, antlerless deer, and turkey hunting.	

Section 4(f) Study Area and Properties for ATMP at Great Smoky Mountains National Park

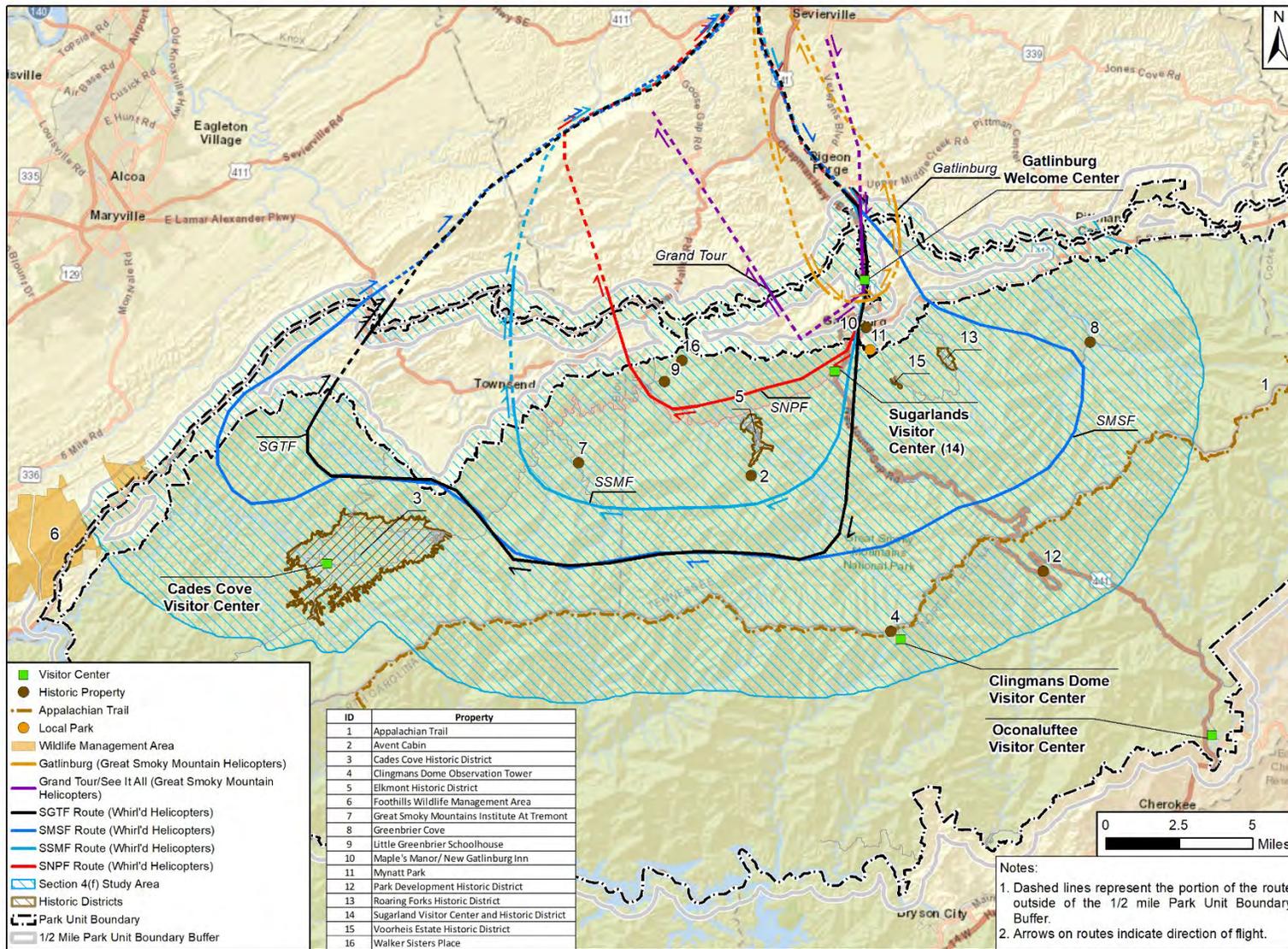


Figure 1. Map of Section 4(f) resources at the Park; includes resources entirely and partially within the Park study area.

Potential Use of Section 4(f) Resources

Evaluating potential impacts to Section 4(f) resources focuses on changes in aircraft noise exposure and visual effects resulting from implementing the ATMP. A constructive use of a Section 4(f) resource would occur if there was a substantial impairment of the resource to the degree that the activities, features, or attributes of the site that contribute to its significance or enjoyment are substantially diminished. This could occur as a result of both visual and noise impacts. The FAA evaluated the Section 4(f) resources for potential noise (including vibration) and visual impacts to determine if there was substantial impairment to Section 4(f) resources due to the ATMP that would result in a constructive use.

Noise Impacts Analysis

Indicators of Acoustic Conditions

There are numerous ways to describe the potential impacts of noise from commercial air tours on the acoustic environment of a park, including intensity, duration, and spatial footprint of the noise. The FAA’s noise evaluation is based on Day Night Average Sound Level Average Annual Day (L_{dn} or DNL), the cumulative noise energy exposure from aircraft. As part of the ATMP noise analysis, the NPS provided supplemental metrics to assess the impact of commercial air tours on visitor experience in quiet settings, including noise sensitive areas of Section 4(f) resources. The metrics and acoustical terminology considered for the Section 4(f) noise analysis are shown in Table 4.

Table 4. Metrics used for the noise analysis.

Metric	Relevance and citation
Day-night average sound level, DNL	<p>The logarithmic average of sound levels, in dBA, over a 24-hour day DNL takes into account the increased sensitivity to noise at night by including a ten dB penalty between 10 p.m. and 7 a.m. local time.</p> <p>The FAA’s indicators of significant impacts are for an action that would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe.⁷</p>
Equivalent sound level, $L_{Aeq, 12\text{ hr}}$	<p>The logarithmic average of commercial air tour sound levels, in dBA, over a 12-hour day. The selected 12-hour period is 7 a.m. to 7 p.m. to represent typical daytime commercial air tour operating hours.</p> <p>Note: Both $L_{Aeq, 12\text{ hr}}$ and DNL characterize:</p> <ul style="list-style-type: none"> • Increases in both the loudness and duration of noise events • The number of noise events during specific time period (12 hours for $L_{Aeq, 12\text{ hr}}$ and 24-hours for DNL) <p>However, DNL takes into account the increased sensitivity to noise at night by including a ten dB penalty between 10 p.m. and 7 a.m. local time. If there are no nighttime events, $L_{Aeq, 12\text{ hr}}$ will be three dB higher than DNL.</p>

⁷ FAA Order 1050.1F, Exhibit 4-1

Maximum sound level, L_{max}	The loudest sound level, in dBA, generated by the loudest event; it is event-based and is independent of the number of operations. L_{max} does not provide any context of frequency, duration, or timing of exposure.
Time Above 35 dBA ⁸	The amount of time (in minutes) that aircraft sound levels are above a given threshold (i.e., 35 dBA) In quiet settings, outdoor sound levels exceeding 35 dB degrade experience in outdoor performance venues (ANSI 12.9-2007, Quantities And Procedures For Description And Measurement Of Environmental Sound – Part 5: Sound Level Descriptors For Determination Of Compatible Land Use); blood pressure increases in sleeping humans (Haralabidis et al., 2008); maximum background noise level inside classrooms (ANSI/ASA S12.60/Part 1-2010, Acoustical Performance Criteria, Design Requirements, And Guidelines For Schools, Part 1: Permanent Schools).
Time Above 52 dBA	The amount of time (in minutes) that aircraft sound levels are above a given threshold (i.e., 52 dBA) This metric represents the level at which one may reasonably expect interference with Park interpretive programs. At this background sound level (52 dB), normal voice communication at five meters (two people five meters apart), or a raised voice to an audience at ten meters would result in 95% sentence intelligibility. ⁹

Modeling Noise Impacts

For aviation noise analyses under the National Environmental Policy Act (NEPA), the FAA determines the cumulative noise energy exposure of individuals resulting from aviation activities in terms of the Average Annual Day (AAD). However, because ATMP operations in the park and study area occur at low annual operational levels and are highly seasonal in nature, FAA determined that a peak day representation of the operations would more adequately allow for disclosure of any potential impacts.¹⁰ A peak day has therefore been used as a conservative representation of assessment of AAD conditions required by FAA policy.

This approach provides a conservative evaluation of potential noise impacts to park resources, as well as Section 4(f) resources, under the ATMP, as the AAD will always reflect fewer commercial air tour operations than a peak day. The 90th percentile day was identified for representation of a peak day and derived from the busiest year of commercial air tour activity from 2017-2019, based on the total number of commercial air tour operations (946 annual commercial air tours on six different routes) and total flight miles over the Park.

⁸ dBA (A-weighted decibels): Sound is measured on a logarithmic scale relative to the reference sound pressure for atmospheric sources, 20 μ Pa. The logarithmic scale is a useful way to express the wide range of sound pressures perceived by the human ear. Sound levels are reported in units of decibels (dB) (ANSI S1.1-1994, American National Standard Acoustical Terminology). A-weighting is applied to sound levels in order to account for the sensitivity of the human ear (ANSI S1.42-2001, Design Response of Weighting Networks for Acoustical Measurements). To approximate human hearing sensitivity, A-weighting discounts sounds below 1 kHz and above 6 kHz.

⁹ Environmental Protection Agency. Information on Levels of Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety, March 1974.

¹⁰ See *U.S. Air Tour Ass'n v. F.A.A.*, 298 F.3d 997, 1017-18 (D.C. Cir. 2002).

The type of aircraft and routes currently flown by operators were further assessed to determine a reasonable representation of the commercial air tour activity at the Park. Under the ATMP, operators will be allowed to conduct commercial air tours on similar routes they currently report flying over the Park with modifications specific to each operator. The ATMP increases the minimum altitude that the operators will be allowed to conduct commercial air tours from a minimum of 1,000 to 1,500 ft. AGL to no lower than 2,600 ft AGL. For the Park, the 90th percentile day was identified as the following:

- Red Route (SNPF) – three flights, BHT-206-L1 aircraft
- Light Blue Route (SSMF) – one flight, BHT-206-L1 aircraft
- Blue Route (SMSF) – one flight, BHT-206-L1 aircraft
- Orange Route (Gatlinburg) – one flight, Bell 206-L aircraft
- Purple Route (Grand Tour/See It All) – one flight, Bell 206-L aircraft

The noise was modeled for the acoustic indicators in Table 4 and 90th percentile day using the FAA's Aviation Environmental Design Tool (AEDT) version 3d. The noise was modeled at points spaced every 0.25 nautical mile throughout the potentially affected area. Please refer to the *Environmental Screening Form* for further detail.

Summary of Potential Noise Impacts

The noise analysis indicates that the ATMP would not result in any noise impacts that would be “significant” or “reportable” under FAA’s policy for the NEPA Guidance.¹¹ Under the ATMP, there are minimal changes to the routes and no changes to the number of commercial air tours per year as compared with existing conditions. The resultant DNL due to the ATMP is expected to be below DNL 45 dBA and does not cause any reportable noise as there is no expected increase or change in noise from the ATMP.

Because the number of authorized flights under the ATMP would be the same as the average number of flights from 2017 to 2019, evaluation of the NPS supplemental metrics show that impacts to Section 4(f) resources would be similar to impacts currently occurring:

- On days when commercial air tours will occur, noise levels above 35 dBA (an indicator used by NPS to assess the potential for degradation of the natural sound environment) will occur for up to 30-35 minutes in a small portion of the study area near Pigeon Forge and for 20-30 minutes in several other areas of the Park (see NPS *Environmental Screening Form*, **Error! Reference source not found.**).
- On days when commercial air tours will occur, noise levels above 52 dBA (which is associated with speech interference) will occur for less than five minutes in several areas directly beneath and adjacent to the route. Section 4(f) resources which fall under the 52 dBA noise contour include: Maple's Manor/New Gatlinburg Inn, Little Greenbrier Schoolhouse, Walker Sisters Place, Mynatt Park, Greenbrier Cove, and Great Smoky Mountains Institute (see *Environmental Screening Form*, Figure 3).

In addition, the ATMP limits the operation of commercial air tours to between two hours after sunrise until two hours before sunset, or at the beginning of sunrise or end of sunset for operators that have converted to quiet technology aircraft and have NPS and FAA authorization, which provides times when

¹¹ Per FAA Order 1050.1F, the FAA refers to noise changes meeting the following criteria as “reportable”: for DNL 65 dB and higher, ± DNL 1.5 dB; for DNL 60 dB to <65 dB, ± DNL 3 dB; for DNL 45 dB to <60 dB, ± DNL 5 dB. See also 1050.1F Desk Reference, Section 11.3.

visitors seeking solitude may experience the Section 4(f) resources without disruptions from commercial air tours. The ATMP also requires commercial air tours to fly at increased altitudes as compared to those flown under existing conditions. The increase of 1,100 to 1,600 ft. AGL (from a minimum 1,000 to 1,500 ft. AGL under existing conditions) will reduce the maximum noise levels at sites directly below the air tour routes.

The ATMP includes designated routes that are based on the routes reported by the operators, with modifications to protect the Park's natural and cultural resources, and visitor experience. Modifications were made to routes flown by the operator with the greater number of annual allocations under the ATMP (see the Red Route, Black Route, Blue Route, and Light Blue Route in Figure 1). For example, the modified Red Route is shorter in length and follows the path of road corridors, which helps mask noise from air tours, when compared with the original reported route. This change avoids the air tours flying over or near two Section 4(f) resources in the study area, the Roaring Fork Historic District and Voorheis Estate. Under the ATMP, commercial air tours are also prohibited within ½-mile of the Appalachian National Scenic Trail (ANST). With the required ½-mile standoff distance, and the minimum 2,600 ft. AGL, it is anticipated noise levels will not exceed 50 dBA (L_{Amax}) for greater than five minutes in any areas of the Park, including those near the ANST. Collectively, these changes from existing operations and their effect on the Section 4(f) resources will likely result in beneficial impacts to the Section 4(f) resources.

As a result, FAA concludes there would be no substantial impairment of Section 4(f) resources in the study area from noise-related effects by the implementation of the ATMP. The ATMP would not result in a significant or reportable increase in noise at the Park and the ATMP will likely provide beneficial impacts to Section 4(f) resources. This all supports the FAA's determination that implementation of the Proposed Action would not constitute a constructive use of Section 4(f) resources in the study area. This Section 4(f) determination is also consistent with the Section 106 no adverse effect determination at the Park (see Section 106 Consultation and Finding of No Adverse Effect letter).

Vibrational Impacts

A review of potential vibrational impacts on sensitive structures such as historic buildings recommend a minimum helicopter standoff distance of (1,320 ft.) horizontal radius at altitudes less than 500 feet above the top of the structure to avoid rattle and damage structures associated with the vibrational energy of helicopter blades.¹² Since the ATMP requires air tours to fly at a minimum altitude greater than 500 feet above these resources, no vibrational impacts are anticipated for the commercial air tour aircraft specified in the ATMP. Additionally, the vibration amplitude of these overflights at the altitudes prescribed in the ATMP will be well below recommended limits.^{13, 14} Vibrational impacts are not anticipated to surrounding parkland and National Forest areas given that aircraft overflights do not contain vibrational energy at levels which would affect outdoor areas or natural features and there is no substantial change from existing conditions.

¹² Hanson, C.E., King, K.W., et al., "Aircraft Noise Effects on Cultural Resources: Review of Technical Literature," NPOA Report No. 91-3 (HMMH Report No.290940.04-1), September 1991.

¹³ Hanson, C.E., King, K.W., et al., "Aircraft Noise Effects on Cultural Resources: Review of Technical Literature," NPOA Report No. 91-3 (HMMH Report No.290940.04-1), September 1991.

¹⁴ Volpe National Transportation Systems Center, Department of Transportation, 2014. Literature Review: Vibration of Natural Structures and Ancient/Historical Dwellings, Internal Report for National Park Service, Natural Sounds and Night Skies Division, August 21, 2014.

Visual Impacts Analysis

The ATMP would not substantially impair Section 4(f) resources within the study area because there would be no measurable change in visual effects from existing conditions. The level of commercial air tour activity under the ATMP will remain similar. Recognizing that some types of Section 4(f) resources may be affected by visual effects of commercial air tours, the FAA and NPS considered the potential for the introduction of visual elements that could substantially diminish the significance or enjoyment of Section 4(f) resources in the study area. Aircraft are transitory elements in a scene and visual impacts tend to be relatively short. The short duration and low number of flights make it unlikely a historic property, forest, or parkland would experience a visual effect from the ATMP. One's perspective of or viewshed from a historic property and natural areas is often drawn to the horizon and aircraft at higher altitudes are less likely to be noticed. Aircraft at lower altitudes may attract visual attention but are also more likely to be screened by vegetation or topography.

As noted above, commercial air tours are restricted from flying within ½-mile of the ANST. This prohibition will help preserve the scenic values of the trail, values which contribute to the trail's national significance. Aircraft may still be seen from the trail, but it is unlikely aircraft noise will be disruptive from most locations along the trail making the aircraft less noticeable. The ATMP allows the Park to establish no-fly periods for special events or planned Park management with one-month advance notice to the operators.

The ATMP limits the number of commercial air tours to 946 flights per year and maintains similar routes as are currently flown under existing conditions, with modifications specific to each operator. Based on the three-year average of reporting data (2017-2019), under current conditions, people in the park are not likely to see more than 7 commercial air tours per day (the ATMP sets a maximum daily limit of seven flights on Flex Days, with most days experiencing five commercial air tours).

Visual impacts to Section 4(f) resources will be similar to impacts currently occurring because the number of authorized flights under the ATMP will be the same as or less than the average number of flights from 2017-2019, and the routes will remain similar as compared to existing conditions. The ATMP would not introduce visual elements or result in visual impacts that would substantially diminish the activities, features or attributes of a Section 4(f) resource. Therefore, there would be no constructive use from visual impacts of Section 4(f) resources.

Conclusion

The FAA has determined that there would be no constructive use to Section 4(f) properties from implementation of the Proposed Action because noise and visual impacts from commercial air tours under the ATMP would not constitute a substantial impairment of Section 4(f) resources in the study area. The noise analysis indicated that there would be no significant impact or reportable increase from implementation of the ATMP. NPS's supplemental noise metrics show that the noise impacts would be similar to current conditions and provisions within the ATMP would provide benefits to Section 4(f) resources. Likewise, the visual impacts to Section 4(f) resources would be similar to impacts currently occurring because the number of authorized flights under the ATMP (946 flights per year) would be the same as or less than the average number of flights from 2017 to 2019, and the routes would remain similar as compared to existing conditions. Together, this supports the FAA's determination that the Proposed Action would not substantially diminish the protected activities, features, or attributes of the Section 4(f) resources in the study area.

The FAA consulted with the NPS and other officials with jurisdiction (OWJ) over Section 4(f) resources in the study area regarding FAA's finding of no substantial impairment, and hence, its no constructive use determination. As a cooperating agency on the Air Tour Management Plan and associated environmental review, NPS was actively engaged with FAA on the proposed action. The FAA, in coordination with the NPS, consulted with the Tennessee and North Carolina State Historic Preservation Offices, Native American tribes, and other consulting parties on the potential impacts of the ATMP on Historic Properties, including cultural landscapes as part of Section 106 consultation. That consultation process led to a finding that the ATMP will have no adverse effect on historic properties. The FAA proposed this finding to all consulting parties. The North Carolina SHPO concurred with the finding; however, the Tennessee SHPO objected to the finding. FAA requested that the Advisory Council on Historic Preservation (Council) review its finding. The Council issued an advisory opinion finding that the FAA appropriately applied the Criteria of Adverse Effect and provided recommendations. The FAA detailed in their response to the Council's advisory opinion how the agencies have taken the Council's recommendations into account and notified consulting parties of the outcome of the Section 106 process.

In addition to consultation with the NPS and the SHPO, FAA corresponded with the officials with jurisdiction related to the remaining Section 4(f) resources. On June 7, 2022, FAA sent a letter to the City of Gatlinburg and the Tennessee Wildlife Resources Agency describing the proposed action, analysis on potential use of Section 4(f) resources under their respective jurisdiction, and FAA's preliminary determination (see attached). Follow-up emails were sent on June 14, 2022. The City of Gatlinburg responded that they do not have any concerns with the proposed plan (see attached). No response, and hence, no objection, was received from the Tennessee Wildlife Resources Agency.

CORRESPONDENCE



United States Department of Transportation
FEDERAL AVIATION ADMINISTRATION
Office of Policy, International Affairs & Environment
Office of Environment and Energy

NATIONAL PARKS AIR TOUR MANAGEMENT PROGRAM

June 7, 2022

Re: Consultation under Section 4(f) of the U.S. Department of Transportation Act (49 U.S.C. § 303) for the development of an Air Tour Management Plan for Great Smoky Mountains National Park

Bobby Wilson
Tennessee Wildlife Resources Agency
5107 Edmondson Pike
Ellington Agricultural Center
Nashville, TN 37211

Dear Bobby Wilson:

The Federal Aviation Administration (FAA), in cooperation with the National Park Service (NPS), is developing an Air Tour Management Plan (ATMP) for the Great Smoky Mountains National Park (Park). The FAA is preparing documentation for the ATMP in accordance with the National Parks Air Tour Management Act (NPATMA) and other applicable laws, including Section 4(f) of the U.S. Department of Transportation Act (Section 4(f)). The purpose of this letter is to coordinate with you on FAA's preliminary findings related to the ATMP's potential impacts to Foothills Wildlife Management Area, which is a protected property under Section 4(f).

Project Background and Purpose of the Action

NPATMA (Public Law 106-181, codified at 49 U.S.C. § 40128) of 2000, directs the agencies to develop ATMPs for commercial air tour operations over units of the national park system. A commercial air tour operation is defined as "a flight conducted for compensation or hire in a powered aircraft where the purpose of the flight is sightseeing over a national park, within ½ mile outside the boundary of a national park or over tribal lands, during which the aircraft flies below an altitude of 5,000 feet (ft.) above ground level (AGL) or less than 1 mile laterally from any geographic feature within the park (unless more than ½ mile outside the boundary)." When NPATMA was passed in 2000, existing air tour operators were permitted to continue air tour operations in parks until an ATMP was completed. To facilitate this continued use, FAA issued Interim Operating Authority (IOA) to existing air tour operators. IOA set an annual limit of the number of flights per operator for each park. In 2012, NPATMA was amended by Congress to, among other things, require operators to report the number of flights conducted on a quarterly interval each year. On February 14, 2019, Public Employees for Environmental Responsibility and the Hawai'i Coalition Malama Pono filed a petition for writ of mandamus seeking to have the agencies complete air tour management plans or voluntary agreements at seven specified parks, In re Public Employees for Environmental Responsibility, et al., Case No. 19-1044 (D.C. Cir.). On May 1, 2020,

the United States Court of Appeals for the District of Columbia Circuit Court granted the petition and ordered the agencies to file a proposed schedule for bringing twenty-three eligible parks, including Great Smoky Mountains National Park, into compliance with NPATMA within two years. The agencies submitted a plan to complete all ATMPs to the court on August 31, 2020.

Section 4(f) is applicable to historic sites and publicly owned parks, recreation areas, and wildlife and waterfowl refuges of national, State, or local significance that may be impacted by transportation programs or projects carried out by the U.S. Department of Transportation (USDOT) and its operating administrations, including the FAA. Section 4(f) of the Department of Transportation Act (codified at 49 U.S.C. § 303(c)), states that, subject to exceptions for *de minimis* impacts:

“... the Secretary may approve a transportation program or project...requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if –

1. There is no prudent and feasible alternative to using that land; and
2. The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.”

The term “use” refers to both direct (physical) and indirect (constructive) impacts to Section 4(f) resources. A physical use involves the physical occupation or alteration of a Section 4(f) resource, while constructive use occurs when a proposed action results in substantial impairment of a resource to the degree that the activities, features, or attributes of the resource that contribute to its significance or enjoyment are substantially diminished. Under the ATMP, potential impacts to Section 4(f) resources from commercial air tours may include noise from aircraft within the acoustic environment, as well as visual impacts.

Description of the Proposed Action

The FAA and the NPS (collectively, the agencies) are developing ATMPs for 24 parks,¹ including the Great Smoky Mountains National Park. The ATMPs are being developed in accordance with NPATMA. Each ATMP is unique and therefore, each ATMP is being assessed individually under Section 4(f).

Commercial air tours have been operating intermittently over the Park for over 20 years. Since 2005, these air tours have been conducted pursuant to IOA issued by FAA in accordance with NPATMA. IOA does not provide any operating conditions (e.g., routes, altitudes, time of day, etc.) for air tours other than a limit of 1,920 air tours per year. The ATMP will replace IOA.

The FAA and the NPS have documented the existing conditions for commercial air tour operations at the Park. The FAA and the NPS consider the existing operations for commercial air tours to be an average of 2017-2019 annual air tours flown, which is 946 flights. The agencies decided to use a three-year average because it reflects the most accurate and reliable air tour conditions based on available operator

¹ On March 4, 2021, the NPS notified the FAA that an air tour management plan was necessary to protect Muir Woods National Monument’s resources and values and withdrew the exemption for the that park. agencies are now proceeding with ATMPs for 24 parks instead of 23.

reporting, and accounts for variations across multiple years, excluding more recent years affected by the COVID 19 pandemic.²

The proposed action is implementing the ATMP at the Park. The following elements of the ATMP are included for the Park:

- A maximum of 946 commercial air tours are authorized per year on the route(s) depicted in **Attachment A**;
- The air tours will fly no lower than 2,600 ft. above ground level (AGL) when over the Park or within ½ mile of its boundary;
- The aircraft types authorized for the commercial air tours includes: BHT-206-B, BHT-206-L1, BHT-206-L3, R-44-44, R-44-II, R-44-RavenII. Any new or replacement aircraft must not exceed the noise level produced by the aircraft being replaced;
- The air tours may operate between two hours after sunrise until two hours before sunset any day of the year, except as provided by the quiet technology incentive. The NPS can establish temporary no-fly periods that apply to commercial air tours for special events or planned Park management.
- The operator is required to install and use flight monitoring technology on all authorized commercial air tours, and to include flight monitoring data in their semi-annual reports to the agencies, along with the number of commercial air tours conducted;
- When made available by Park staff, the operator/pilot may take at least one training course per year conducted by the NPS. The training will include Park information that the operator can use to further their own understanding of Park priorities and management objectives as well as enhance the interpretive narrative for air tour clients and increase understanding of parks by air tour clients;
- At the request of either of the agencies, the Park staff, the FAA Flight Standards District Office (FSDO), and the operator may meet once per year to discuss the implementation of this ATMP and any amendments or other changes to the ATMP. This annual meeting could be conducted in conjunction with any required annual training; and
- For situational awareness when conducting tours of the Park, the operator will utilize frequency 122.9 and report when they enter and depart a route. The pilot should identify their company, aircraft, and route to make any other aircraft in the vicinity aware of their position.

The FAA and the NPS are both responsible for monitoring and oversight of the ATMP.

Section 4(f)

The study area for considering Section 4(f) resources for the ATMP consists of the commercial air tour route over the Park and a half-mile outside the boundary of the Park, plus an additional buffer of four miles extending from either side of the centerline of the air tour route (the total buffer is 8 miles wide). The study area for Section 4(f) resources also corresponds with the Area of Potential Effects (APE) used for compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966 (Section 106) for the Park. See **Attachment A** for a depiction of the Section 4(f) study area. Historic properties were identified as part of the Section 106 consultation process. Parks, recreational areas, and wildlife and

² Altitude expressed in units above ground level (AGL) is a measurement of the distance between the ground surface and the aircraft, whereas altitude expressed in median sea level (MSL) refers to the altitude of aircraft above sea level, regardless of the terrain below it. Aircraft flying at a constant MSL altitude would simultaneously fly at varying AGL altitudes, and vice versa, assuming uneven terrain is present below the aircraft.

waterfowl refuges were identified using public datasets from Federal, State, and local sources, which included the Tennessee Department of Environment and Conservation. Each resource that intersected the study area (i.e., some portion of the property fell within the Park or ½ mile buffer around the Park) was included in the Section 4(f) analysis.

Potential Use of Section 4(f) Resources

Evaluating potential impacts to Section 4(f) resources focuses on changes in aircraft noise exposure and visual effects resulting from implementing the ATMP. A constructive use of a Section 4(f) resource would occur if there was a substantial impairment of the resource to the degree that the activities, features, or attributes of the site that contribute to its significance or enjoyment are substantially diminished. This could occur as a result of both visual and noise impacts. The FAA evaluated the Section 4(f) resources for potential noise (including vibration) and visual impacts to determine if there was substantial impairment to Section 4(f) resources due to the ATMP that might result in a constructive use.

Noise Impacts Analysis

The FAA’s noise evaluation is based on Day Night Average Sound Level Average Annual Day (Ldn or DNL), the cumulative noise energy exposure from aircraft. As part of the ATMP noise analysis, the NPS provided supplemental metrics to assess the impact of commercial air tours on visitor experience in quiet settings, including noise sensitive areas of Section 4(f) resources. The metrics and acoustical terminology considered for the Section 4(f) noise analysis are shown in the table below.

Metric	Relevance and citation
Day-night average sound level, DNL	<p>The logarithmic average of sound levels, in dBA, over a 24-hour day DNL takes into account the increased sensitivity to noise at night by including a ten dB penalty between 10 p.m. and 7 a.m. local time.</p> <p>The FAA’s indicators of significant impacts are for an action that would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe.³</p>
Equivalent sound level, $L_{Aeq, 12hr}$	<p>The logarithmic average of commercial air tour sound levels, in dBA, over a 12-hour day. The selected 12-hour period is 7 a.m. to 7 p.m. to represent typical daytime commercial air tour operating hours.</p> <p>Note: Both $L_{Aeq, 12hr}$ and DNL and characterize:</p> <ul style="list-style-type: none"> • Increases in both the loudness and duration of noise events • The number of noise events during specific time period (12 hours for $L_{Aeq, 12hr}$ and 24-hours for DNL)

³ FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, Exhibit 4-1

	However, DNL takes into account the increased sensitivity to noise at night by including a ten dB penalty between 10 p.m. and 7 a.m. local time. If there are no nighttime events, $L_{Aeq, 12hr}$ will be three dB higher than DNL.
Maximum sound level, L_{max}	The loudest sound level, in dBA, generated by the loudest event; it is event-based and is independent of the number of operations. L_{max} does not provide any context of frequency, duration, or timing of exposure.
Time Above 35 dBA ⁴	The amount of time (in minutes) that aircraft sound levels are above a given threshold (i.e., 35 dBA) In quiet settings, outdoor sound levels exceeding 35 dB degrade experience in outdoor performance venues (ANSI 12.9-2007, Quantities And Procedures For Description And Measurement Of Environmental Sound – Part 5: Sound Level Descriptors For Determination Of Compatible Land Use); Blood pressure increases in sleeping humans (Haralabidis et al., 2008); maximum background noise level inside classrooms (ANSI/ASA S12.60/Part 1-2010, Acoustical Performance Criteria, Design Requirements, And Guidelines For Schools, Part 1: Permanent Schools).
Time Above 52 dBA	The amount of time (in minutes) that aircraft sound levels are above a given threshold (i.e., 52 dBA) This metric represents the level at which one may reasonably expect interference with Park interpretive programs. At this background sound level (52 dB), normal voice communication at five meters (two people five meters apart), or a raised voice to an audience at ten meters would result in 95% sentence intelligibility. ⁵

For aviation noise analyses under the National Environmental Policy Act (NEPA), the FAA determines the cumulative noise energy exposure of individuals resulting from aviation activities in terms of the Average Annual Day (AAD). However, because ATMP operations in the park occur at low annual operational levels and are highly seasonal in nature, the FAA determined that a peak day representation of the operations would more adequately allow for disclosure of any potential impacts.⁶ A peak day has therefore been used as a conservative representation of assessment of AAD conditions required by FAA policy.

This provides a conservative evaluation of potential noise impacts to park resources, as well as Section 4(f) resources, under the ATMP, as the AAD will always reflect fewer commercial air tour operations

⁴ dBA (A-weighted decibels): Sound is measured on a logarithmic scale relative to the reference sound pressure for atmospheric sources, 20 μ Pa. The logarithmic scale is a useful way to express the wide range of sound pressures perceived by the human ear. Sound levels are reported in units of decibels (dB) (ANSI S1.1-1994, American National Standard Acoustical Terminology). A-weighting is applied to sound levels in order to account for the sensitivity of the human ear (ANSI S1.42-2001, Design Response of Weighting Networks for Acoustical Measurements). To approximate human hearing sensitivity, A-weighting discounts sounds below 1 kHz and above 6 kHz.

⁵ Environmental Protection Agency. Information on Levels of Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety, March 1974.

⁶ See U.S. Air Tour Ass'n v. F.A.A., 298 F.3d 997, 1017-18 (D.C. Cir. 2002).

than a peak day. The 90th percentile day was identified for representation of a peak day and derived from the busiest year of commercial air tour activity from 2017-2019, based on the total number of commercial air tour operations and total flight miles over the Park. It was then further assessed for the type of aircraft and route flown to determine if it is a reasonable representation of the commercial air tour activity at the Park. For the Park, the 90th percentile day was identified as the following:

- Red Route (SNPF) – three flights, BHT-206-L1 aircraft
- Light Blue Route (SSMF) – one flight, BHT-206-L1 aircraft
- Blue Route (SMSF) – one flight, BHT-206-L1 aircraft
- Orange Route (Gatlinburg) – one flight, Bell 206-L aircraft
- Purple Route (Grand Tour/See It All) – one flight, Bell 206-L aircraft

The noise was modeled for the acoustic indicators in the table above and 90th percentile day using the FAA's Aviation Environmental Design Tool (AEDT) version 3d. The noise was modeled at points spaced every 0.25 nautical mile throughout the potentially affected area.

The noise analysis indicates that the ATMP would not result in any noise impacts that would be “significant,” as described in the table above, or “reportable” under FAA’s policy for the NEPA. Under the ATMP, there are minimal changes to the routes and no changes to the number of commercial air tours per year as compared with existing conditions. The resultant DNL due to the ATMP is expected to be below DNL 45 dBA and does not cause any reportable noise as there is no expected increase or change in noise from the ATMP.

Because the number of authorized flights under the ATMP would be the same as the average number of flights from 2017 to 2019, evaluation of the NPS supplemental metrics show that impacts to Section 4(f) resources would be similar to impacts currently occurring:

- On days when commercial air tours will occur, noise levels above 35 dBA (an indicator used by NPS to assess the potential for degradation of the natural sound environment) will occur for up to 30-35 minutes in a small portion of the study area near Pidgeon Forge and for 20-30 minutes in several other areas of the Park.
- On days when commercial air tours will occur, noise levels above 52 dBA (which is associated with speech interference) will occur for less than five minutes in several areas directly beneath and adjacent to the route. The Foothills Wildlife Management Area does not fall under the 52 dBA noise contour.

In addition, the ATMP limits the operation of commercial air tours to between two hours after sunrise until two hours before sunset, or at the beginning of sunrise or end of sunset for operators that have converted to quiet technology aircraft, which provides times when visitors seeking solitude may experience the Section 4(f) resources without disruptions from commercial air tours. The ATMP also requires commercial air tours to fly at increased altitudes as compared to those flown under existing conditions. The increase of 1,100 to 1,600 ft. AGL (from a minimum 1,000 to 1,500 ft. AGL under existing conditions) will reduce the maximum noise levels at sites directly below the air tour routes.

The ATMP includes designated routes that are based on the routes reported by the operators, with modifications to protect the Park’s natural and cultural resources, and visitor experience. Modifications were made to routes flown by the operator with the greater number of annual allocations under the

ATMP (see the Red Route, Black Route, Blue Route, and Light Blue Route in Figure 1). For example, the modified Red Route is shorter in length and follows the path of road corridors, which helps mask noise from air tours, when compared with the original reported route. This change avoids the air tours flying over or near two Section 4(f) resources in the study area, the Roaring Fork Historic District and Voorheis Estate. Under the ATMP, commercial air tours are also prohibited within ½-mile of the Appalachian National Scenic Trail (ANST). With the required ½-mile standoff distance, and the minimum 2,600 ft. AGL, it is anticipated noise levels will not exceed 50 dBA (L_{Amax}) for greater than five minutes in any areas of the Park, including those near the ANST. Collectively, these changes from existing operations and their effect on the current use of Section 4(f) resources will likely result in beneficial impacts to the Section 4(f) resources.

A review of the potential for vibrational impacts on historic buildings, parklands, and forests suggests that the potential for damage resulting from fixed-wing propeller aircraft overflights is minimal, as the fundamental blade passage frequency is well above the natural frequency of these structures. Additionally, the vibration amplitude of these overflights at the altitudes prescribed in the ATMP will be well below recommended limits.

As a result, FAA concludes there would be no substantial impairment of Section 4(f) resources in the study area from noise-related and vibrational effects by the implementation of the ATMP. The ATMP would not result in significant or reportable increase in noise at the Park and the ATMP will likely provide beneficial impacts to Section 4(f) resource. Likewise, vibrational impacts from air tour overflights would be minimal. This all supports the FAA's determination that implementation of the Proposed Action would not constitute a constructive use of Section 4(f) resources in the study area.

Visual Impacts Analysis

The ATMP would not substantially impair Section 4(f) resources within the study area because there would be no measurable change in visual effects from existing conditions. The level of commercial air tour activity under the ATMP will remain the same. Recognizing that some types of Section 4(f) resources may be affected by visual effects of commercial air tours, the FAA and NPS considered the potential for the introduction of visual elements that could substantially diminish the significance or enjoyment of Section 4(f) resources in the study area. Aircraft are transitory elements in a scene and visual impacts tend to be relatively short. The short duration and low number of flights make it unlikely a historic property, forest, or parkland would experience a visual effect from the ATMP. One's perspective of or viewshed from a historic property and natural areas is often drawn to the horizon and aircraft at higher altitudes are less likely to be noticed. Aircraft at lower altitudes may attract visual attention but are also more likely to be screened by vegetation or topography.

As noted above, commercial air tours are restricted from flying within ½-mile of the ANST. This prohibition will help preserve the scenic values of the trail, values which contribute to the trail's national significance. Aircraft may still be seen from the trail, but it is unlikely aircraft noise will be disruptive from most locations along the trail making the aircraft less noticeable. The ATMP allows the Park to establish no-fly periods for special events or planned Park management with one-month advance notice to the operators.

The ATMP limits the number of commercial air tours to 946 flights per year and maintains similar routes as are currently flown under existing conditions, with modifications specific to each operator. Based on the three-year average of reporting data (2017-2019), under current conditions, people in the park are

not likely to see more than 7 commercial air tours per day (the ATMP sets a maximum daily limit of seven flights on Flex Days, with most days experiencing five commercial air tours).

Visual impacts to Section 4(f) resources will be similar to impacts currently occurring because the number of authorized flights under the ATMP will be the same as or less than the average number of flights from 2017-2019, and the routes will remain similar as compared to existing conditions. The ATMP would not introduce visual elements or result in visual impacts that would substantially diminish the activities, features or attributes of a Section 4(f) resource. Therefore, there would be no constructive use from visual impacts to Section 4(f) resources.

Preliminary Finding

The FAA has preliminarily determined the ATMP would not substantially diminish the protected activities, features, or attributes of the Section 4(f) resources in the study area. There is no anticipated change in visual and noise impacts over existing conditions as a result of the ATMP. Moreover, the noise analysis indicated that there would be no significant impact or reportable increase from implementation of the ATMP. The ATMP would not result in substantial impairment of Section 4(f) resources; therefore, based on the analysis above, FAA intends to make a determination of no constructive use of Foothills Wildlife Management Area. We request that you review this information and respond with any concerns or need for further consultation on the FAA's proposed no substantial impairment finding within fourteen days of receiving this letter.

Should you have any questions regarding any of the above, please contact Eric Elmore, Senior Policy Advisor, FAA Office of Environment and Energy at 202-267-8335 or eric.elmore@faa.gov and copy the ATMP team at ATMPTeam@dot.gov.

Sincerely,

**ERIC M
ELMORE**

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Eric Elmore
Senior Policy Advisor
Office of Environment and Energy
Federal Aviation Administration

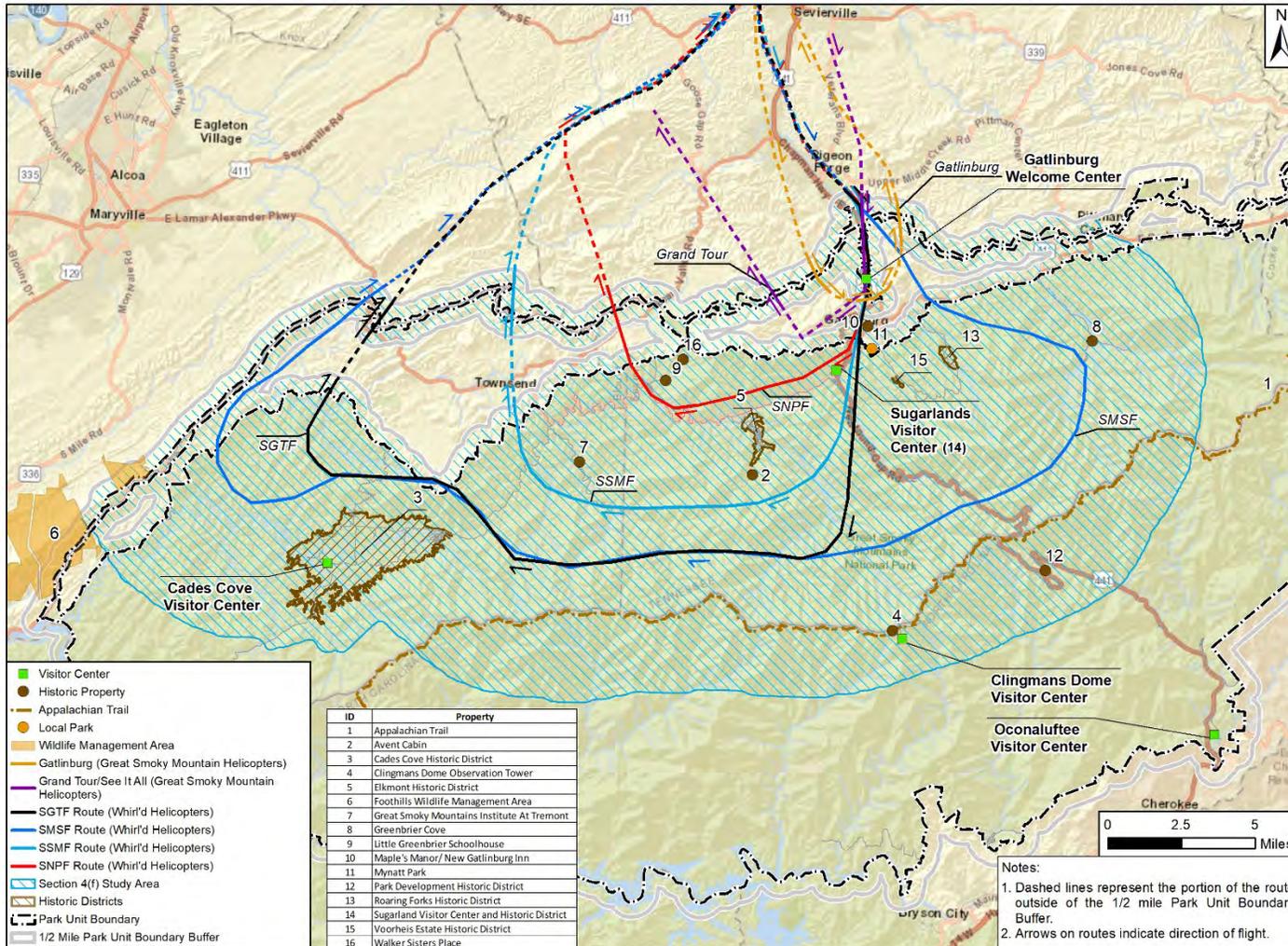
Attachments

- A. Map including proposed Commercial Air Tour Routes, Section 4(f) Study Area, and Section 4(f) Resources

ATTACHMENT A

Map of Proposed Commercial Air Tour Routes, Section 4(f) Study Area, and Section 4(f) Resources

Section 4(f) Study Area and Properties for ATMP at Great Smoky Mountains National Park





United States Department of Transportation
FEDERAL AVIATION ADMINISTRATION
Office of Policy, International Affairs & Environment
Office of Environment and Energy

NATIONAL PARKS AIR TOUR MANAGEMENT PROGRAM

June 7, 2022

Re: Consultation under Section 4(f) of the U.S. Department of Transportation Act (49 U.S.C. § 303) for the development of an Air Tour Management Plan for Great Smoky Mountains National Park

Cindy Cameron Ogle
City of Gatlinburg
157 Mills Park Rd
Gatlinburg, TN 37738

Dear Cindy Cameron Ogle:

The Federal Aviation Administration (FAA), in cooperation with the National Park Service (NPS), is developing an Air Tour Management Plan (ATMP) for the Great Smoky Mountains National Park (Park). The FAA is preparing documentation for the ATMP in accordance with the National Parks Air Tour Management Act (NPATMA) and other applicable laws, including Section 4(f) of the U.S. Department of Transportation Act (Section 4(f)). The purpose of this letter is to coordinate with you on FAA's preliminary findings related to the ATMP's potential impacts to Mynatt Park, which is a protected property under Section 4(f).

Project Background and Purpose of the Action

NPATMA (Public Law 106-181, codified at 49 U.S.C. § 40128) of 2000, directs the agencies to develop ATMPs for commercial air tour operations over units of the national park system. A commercial air tour operation is defined as "a flight conducted for compensation or hire in a powered aircraft where the purpose of the flight is sightseeing over a national park, within ½ mile outside the boundary of a national park or over tribal lands, during which the aircraft flies below an altitude of 5,000 feet (ft.) above ground level (AGL) or less than 1 mile laterally from any geographic feature within the park (unless more than ½ mile outside the boundary)." When NPATMA was passed in 2000, existing air tour operators were permitted to continue air tour operations in parks until an ATMP was completed. To facilitate this continued use, FAA issued Interim Operating Authority (IOA) to existing air tour operators. IOA set an annual limit of the number of flights per operator for each park. In 2012, NPATMA was amended by Congress to, among other things, require operators to report the number of flights conducted on a quarterly interval each year. On February 14, 2019, Public Employees for Environmental Responsibility and the Hawai'i Coalition Malama Pono filed a petition for writ of mandamus seeking to have the agencies complete air tour management plans or voluntary agreements at seven specified parks, In re Public Employees for Environmental Responsibility, et al., Case No. 19-1044 (D.C. Cir.). On May 1, 2020, the United States Court of Appeals for the District of Columbia Circuit granted the petition and

ordered the agencies to file a proposed schedule for bringing twenty-three eligible parks, including Great Smoky Mountains National Park, into compliance with NPATMA within two years. The agencies submitted a plan to complete all ATMPs to the court on August 31, 2020.

Section 4(f) is applicable to historic sites and publicly owned parks, recreation areas, and wildlife and waterfowl refuges of national, State, or local significance that may be impacted by transportation programs or projects carried out by the U.S. Department of Transportation (USDOT) and its operating administrations, including the FAA. Section 4(f) of the Department of Transportation Act (codified at 49 U.S.C. § 303(c)), states that, subject to exceptions for *de minimis* impacts:

“... the Secretary may approve a transportation program or project...requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if –

1. There is no prudent and feasible alternative to using that land; and
2. The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.”

The term “use” refers to both direct (physical) and indirect (constructive) impacts to Section 4(f) resources. A physical use involves the physical occupation or alteration of a Section 4(f) resource, while constructive use occurs when a proposed action results in substantial impairment of a resource to the degree that the activities, features, or attributes of the resource that contribute to its significance or enjoyment are substantially diminished. Under the ATMP, potential impacts to Section 4(f) resources from commercial air tours may include noise from aircraft within the acoustic environment, as well as visual impacts.

Description of the Proposed Action

The FAA and the NPS (collectively, the agencies) are developing ATMPs for 24 parks,¹ including the Great Smoky Mountains National Park. The ATMPs are being developed in accordance with NPATMA. Each ATMP is unique and therefore, each ATMP is being assessed individually under Section 4(f).

Commercial air tours have been operating intermittently over the Park for over 20 years. Since 2005, these air tours have been conducted pursuant to IOA issued by FAA in accordance with NPATMA. IOA does not provide any operating conditions (e.g., routes, altitudes, time of day, etc.) for air tours other than a limit of 1,920 air tours per year. The ATMP will replace IOA.

The FAA and the NPS have documented the existing conditions for commercial air tour operations at the Park. The FAA and the NPS consider the existing operations for commercial air tours to be an average of 2017-2019 annual air tours flown, which is 946 flights. The agencies decided to use a three-year average because it reflects the most accurate and reliable air tour conditions based on available operator

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reporting, and accounts for variations across multiple years, excluding more recent years affected by the COVID 19 pandemic.²

The proposed action is implementing the ATMP at the Park. The following elements of the ATMP are included for the Park:

- A maximum of 946 commercial air tours are authorized per year on the route(s) depicted in **Attachment A**;
- The air tours will fly no lower than 2,600 ft. above ground level (AGL) when over the Park or within ½ mile of its boundary;
- The aircraft types authorized for the commercial air tours includes: BHT-206-B, BHT-206-L1, BHT-206-L3, R-44-44, R-44-II, R-44-RavenII. Any new or replacement aircraft must not exceed the noise level produced by the aircraft being replaced;
- The air tours may operate between two hours after sunrise until two hours before sunset any day of the year, except as provided by the quiet technology incentive. The NPS can establish temporary no-fly periods that apply to commercial air tours for special events or planned Park management.
- The operator is required to install and use flight monitoring technology on all authorized commercial air tours, and to include flight monitoring data in their semi-annual reports to the agencies, along with the number of commercial air tours conducted;
- When made available by Park staff, the operator/pilot may take at least one training course per year conducted by the NPS. The training will include Park information that the operator can use to further their own understanding of Park priorities and management objectives as well as enhance the interpretive narrative for air tour clients and increase understanding of parks by air tour clients;
- At the request of either of the agencies, the Park staff, the FAA Flight Standards District Office (FSDO), and the operator may meet once per year to discuss the implementation of this ATMP and any amendments or other changes to the ATMP. This annual meeting could be conducted in conjunction with any required annual training; and
- For situational awareness when conducting tours of the Park, the operator will utilize frequency 122.9 and report when they enter and depart a route. The pilot should identify their company, aircraft, and route to make any other aircraft in the vicinity aware of their position.

The FAA and the NPS are both responsible for monitoring and oversight of the ATMP.

Section 4(f)

The study area for considering Section 4(f) resources for the ATMP consists of the commercial air tour route over the Park and a half-mile outside the boundary of the Park, plus an additional buffer of four miles extending from either side of the centerline of the air tour route (the total buffer is 8 miles wide). The study area for Section 4(f) resources also corresponds with the Area of Potential Effects (APE) used for compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966 (Section 106) for the Park. See **Attachment A** for a depiction of the Section 4(f) study area. Historic properties were identified as part of the Section 106 consultation process. Parks, recreational areas, and wildlife and

² Altitude expressed in units above ground level (AGL) is a measurement of the distance between the ground surface and the aircraft, whereas altitude expressed in median sea level (MSL) refers to the altitude of aircraft above sea level, regardless of the terrain below it. Aircraft flying at a constant MSL altitude would simultaneously fly at varying AGL altitudes, and vice versa, assuming uneven terrain is present below the aircraft.

waterfowl refuges were identified using public datasets from Federal, State, and local sources, which included the Tennessee Department of Environment and Conservation. Each resource that intersected the study area (i.e., some portion of the property fell within the Park or ½ mile buffer around the Park) was included in the Section 4(f) analysis.

Potential Use of Section 4(f) Resources

Evaluating potential impacts to Section 4(f) resources focuses on changes in aircraft noise exposure and visual effects resulting from implementing the ATMP. A constructive use of a Section 4(f) resource would occur if there was a substantial impairment of the resource to the degree that the activities, features, or attributes of the site that contribute to its significance or enjoyment are substantially diminished. This could occur as a result of both visual and noise impacts. The FAA evaluated the Section 4(f) resources for potential noise (including vibration) and visual impacts to determine if there was substantial impairment to Section 4(f) resources due to the ATMP that might result in a constructive use.

Noise Impacts Analysis

The FAA’s noise evaluation is based on Day Night Average Sound Level Average Annual Day (Ldn or DNL), the cumulative noise energy exposure from aircraft. As part of the ATMP noise analysis, the NPS provided supplemental metrics to assess the impact of commercial air tours on visitor experience in quiet settings, including noise sensitive areas of Section 4(f) resources. The metrics and acoustical terminology considered for the Section 4(f) noise analysis are shown in the table below.

Metric	Relevance and citation
Day-night average sound level, DNL	<p>The logarithmic average of sound levels, in dBA, over a 24-hour day DNL takes into account the increased sensitivity to noise at night by including a ten dB penalty between 10 p.m. and 7 a.m. local time.</p> <p>The FAA’s indicators of significant impacts are for an action that would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe.³</p>
Equivalent sound level, $L_{Aeq, 12hr}$	<p>The logarithmic average of commercial air tour sound levels, in dBA, over a 12-hour day. The selected 12-hour period is 7 a.m. to 7 p.m. to represent typical daytime commercial air tour operating hours.</p> <p>Note: Both $L_{Aeq, 12hr}$ and DNL and characterize:</p> <ul style="list-style-type: none"> • Increases in both the loudness and duration of noise events • The number of noise events during specific time period (12 hours for $L_{Aeq, 12hr}$ and 24-hours for DNL)

³ FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, Exhibit 4-1

	However, DNL takes into account the increased sensitivity to noise at night by including a ten dB penalty between 10 p.m. and 7 a.m. local time. If there are no nighttime events, $L_{Aeq, 12hr}$ will be three dB higher than DNL.
Maximum sound level, L_{max}	The loudest sound level, in dBA, generated by the loudest event; it is event-based and is independent of the number of operations. L_{max} does not provide any context of frequency, duration, or timing of exposure.
Time Above 35 dBA ⁴	The amount of time (in minutes) that aircraft sound levels are above a given threshold (i.e., 35 dBA) In quiet settings, outdoor sound levels exceeding 35 dB degrade experience in outdoor performance venues (ANSI 12.9-2007, Quantities And Procedures For Description And Measurement Of Environmental Sound – Part 5: Sound Level Descriptors For Determination Of Compatible Land Use); Blood pressure increases in sleeping humans (Haralabidis et al., 2008); maximum background noise level inside classrooms (ANSI/ASA S12.60/Part 1-2010, Acoustical Performance Criteria, Design Requirements, And Guidelines For Schools, Part 1: Permanent Schools).
Time Above 52 dBA	The amount of time (in minutes) that aircraft sound levels are above a given threshold (i.e., 52 dBA) This metric represents the level at which one may reasonably expect interference with Park interpretive programs. At this background sound level (52 dB), normal voice communication at five meters (two people five meters apart), or a raised voice to an audience at ten meters would result in 95% sentence intelligibility. ⁵

For aviation noise analyses under the National Environmental Policy Act (NEPA), the FAA determines the cumulative noise energy exposure of individuals resulting from aviation activities in terms of the Average Annual Day (AAD). However, because ATMP operations in the park occur at low annual operational levels and are highly seasonal in nature, the FAA determined that a peak day representation of the operations would more adequately allow for disclosure of any potential impacts.⁶ A peak day has therefore been used as a conservative representation of assessment of AAD conditions required by FAA policy.

This provides a conservative evaluation of potential noise impacts to park resources, as well as Section 4(f) resources, under the ATMP, as the AAD will always reflect fewer commercial air tour operations

⁴ dBA (A-weighted decibels): Sound is measured on a logarithmic scale relative to the reference sound pressure for atmospheric sources, 20 μ Pa. The logarithmic scale is a useful way to express the wide range of sound pressures perceived by the human ear. Sound levels are reported in units of decibels (dB) (ANSI S1.1-1994, American National Standard Acoustical Terminology). A-weighting is applied to sound levels in order to account for the sensitivity of the human ear (ANSI S1.42-2001, Design Response of Weighting Networks for Acoustical Measurements). To approximate human hearing sensitivity, A-weighting discounts sounds below 1 kHz and above 6 kHz.

⁵ Environmental Protection Agency. Information on Levels of Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety, March 1974.

⁶ See U.S. Air Tour Ass'n v. F.A.A., 298 F.3d 997, 1017-18 (D.C. Cir. 2002).

than a peak day. The 90th percentile day was identified for representation of a peak day and derived from the busiest year of commercial air tour activity from 2017-2019, based on the total number of commercial air tour operations and total flight miles over the Park. It was then further assessed for the type of aircraft and route flown to determine if it is a reasonable representation of the commercial air tour activity at the Park. For the Park, the 90th percentile day was identified as the following:

- Red Route (SNPF) – three flights, BHT-206-L1 aircraft
- Light Blue Route (SSMF) – one flight, BHT-206-L1 aircraft
- Blue Route (SMSF) – one flight, BHT-206-L1 aircraft
- Orange Route (Gatlinburg) – one flight, Bell 206-L aircraft
- Purple Route (Grand Tour/See It All) – one flight, Bell 206-L aircraft

The noise was modeled for the acoustic indicators in the table above and 90th percentile day using the FAA's Aviation Environmental Design Tool (AEDT) version 3d. The noise was modeled at points spaced every 0.25 nautical mile throughout the potentially affected area.

The noise analysis indicates that the ATMP would not result in any noise impacts that would be “significant,” as described in the table above, or “reportable” under FAA’s policy for the NEPA. Under the ATMP, there are minimal changes to the routes and no changes to the number of commercial air tours per year as compared with existing conditions. The resultant DNL due to the ATMP is expected to be below DNL 45 dBA and does not cause any reportable noise as there is no expected increase or change in noise from the ATMP.

Because the number of authorized flights under the ATMP would be the same as the average number of flights from 2017 to 2019, evaluation of the NPS supplemental metrics show that impacts to Section 4(f) resources would be similar to impacts currently occurring:

- On days when commercial air tours will occur, noise levels above 35 dBA (an indicator used by NPS to assess the potential for degradation of the natural sound environment) will occur for up to 30-35 minutes in a small portion of the study area near Pidgeon Forge and for 20-30 minutes in several other areas of the Park.
- On days when commercial air tours will occur, noise levels above 52 dBA (which is associated with speech interference) will occur for less than five minutes in several areas directly beneath and adjacent to the route. Mynatt Park [note whether it falls under the 52 dBA noise contour.]

In addition, the ATMP limits the operation of commercial air tours to between two hours after sunrise until two hours before sunset, or at the beginning of sunrise or end of sunset for operators that have converted to quiet technology aircraft, which provides times when visitors seeking solitude may experience the Section 4(f) resources without disruptions from commercial air tours. The ATMP also requires commercial air tours to fly at increased altitudes as compared to those flown under existing conditions. The increase of 1,100 to 1,600 ft. AGL (from a minimum 1,000 to 1,500 ft. AGL under existing conditions) will reduce the maximum noise levels at sites directly below the air tour routes.

The ATMP includes designated routes that are based on the routes reported by the operators, with modifications to protect the Park’s natural and cultural resources, and visitor experience. Modifications were made to routes flown by the operator with the greater number of annual allocations under the ATMP (see the Red Route, Black Route, Blue Route, and Light Blue Route in Figure 1). For example, the

modified Red Route is shorter in length and follows the path of road corridors, which helps mask noise from air tours, when compared with the original reported route. This change avoids the air tours flying over or near two Section 4(f) resources in the study area, the Roaring Fork Historic District and Voorheis Estate. Under the ATMP, commercial air tours are also prohibited within ½-mile of the Appalachian National Scenic Trail (ANST). With the required ½-mile standoff distance, and the minimum 2,600 ft. AGL, it is anticipated noise levels will not exceed 50 dBA (L_{Amax}) for greater than five minutes in any areas of the Park, including those near the ANST. Collectively, these changes from existing operations and their effect on the current use of Section 4(f) resources will likely result in beneficial impacts to the Section 4(f) resources.

A review of the potential for vibrational impacts on historic buildings, parklands, and forests suggests that the potential for damage resulting from fixed-wing propeller aircraft overflights is minimal, as the fundamental blade passage frequency is well above the natural frequency of these structures. Additionally, the vibration amplitude of these overflights at the altitudes prescribed in the ATMP will be well below recommended limits.

As a result, FAA concludes there would be no substantial impairment of Section 4(f) resources in the study area from noise-related and vibrational effects by the implementation of the ATMP. The ATMP would not result in significant or reportable increase in noise at the Park and the ATMP will likely provide beneficial impacts to Section 4(f) resource. Likewise, vibrational impacts from air tour overflights would be minimal. This all supports the FAA's determination that implementation of the Proposed Action would not constitute a constructive use of Section 4(f) resources in the study area.

Visual Impacts Analysis

The ATMP would not substantially impair Section 4(f) resources within the study area because there would be no measurable change in visual effects from existing conditions. The level of commercial air tour activity under the ATMP will remain the same. Recognizing that some types of Section 4(f) resources may be affected by visual effects of commercial air tours, the FAA and NPS considered the potential for the introduction of visual elements that could substantially diminish the significance or enjoyment of Section 4(f) resources in the study area. Aircraft are transitory elements in a scene and visual impacts tend to be relatively short. The short duration and low number of flights make it unlikely a historic property, forest, or parkland would experience a visual effect from the ATMP. One's perspective of or viewshed from a historic property and natural areas is often drawn to the horizon and aircraft at higher altitudes are less likely to be noticed. Aircraft at lower altitudes may attract visual attention but are also more likely to be screened by vegetation or topography.

As noted above, commercial air tours are restricted from flying within ½-mile of the ANST. This prohibition will help preserve the scenic values of the trail, values which contribute to the trail's national significance. Aircraft may still be seen from the trail, but it is unlikely aircraft noise will be disruptive from most locations along the trail making the aircraft less noticeable. The ATMP allows the Park to establish no-fly periods for special events or planned Park management with one-month advance notice to the operators.

The ATMP limits the number of commercial air tours to 946 flights per year and maintains similar routes as are currently flown under existing conditions, with modifications specific to each operator. Based on the three-year average of reporting data (2017-2019), under current conditions, people in the park are

not likely to see more than 7 commercial air tours per day (the ATMP sets a maximum daily limit of seven flights on Flex Days, with most days experiencing five commercial air tours).

Visual impacts to Section 4(f) resources will be similar to impacts currently occurring because the number of authorized flights under the ATMP will be the same as or less than the average number of flights from 2017-2019, and the routes will remain similar as compared to existing conditions. The ATMP would not introduce visual elements or result in visual impacts that would substantially diminish the activities, features or attributes of a Section 4(f) resource. Therefore, there would be no constructive use from visual impacts to Section 4(f) resources.

Preliminary Finding

The FAA has preliminarily determined the ATMP would not substantially diminish the protected activities, features, or attributes of the Section 4(f) resources in the study area. There is no anticipated change in visual and noise impacts over existing conditions as a result of the ATMP. Moreover, the noise analysis indicated that there would be no significant impact or reportable increase from implementation of the ATMP. The ATMP would not result in substantial impairment of Section 4(f) resources; therefore, based on the analysis above, FAA intends to make a determination of no constructive use of Mynatt Park. We request that you review this information and respond with any concerns or need for further consultation on the FAA's proposed no substantial impairment finding within fourteen days of receiving this letter.

Should you have any questions regarding any of the above, please contact Eric Elmore, Senior Policy Advisor, FAA Office of Environment and Energy at 202-267-8335 or eric.elmore@faa.gov and copy the ATMP team at ATMPTeam@dot.gov.

Sincerely,

**ERIC M
ELMORE**

Digitally signed by ERIC
M ELMORE
Date: 2022.06.07
00:59:57 -04'00'

Eric Elmore
Senior Policy Advisor
Office of Environment and Energy
Federal Aviation Administration

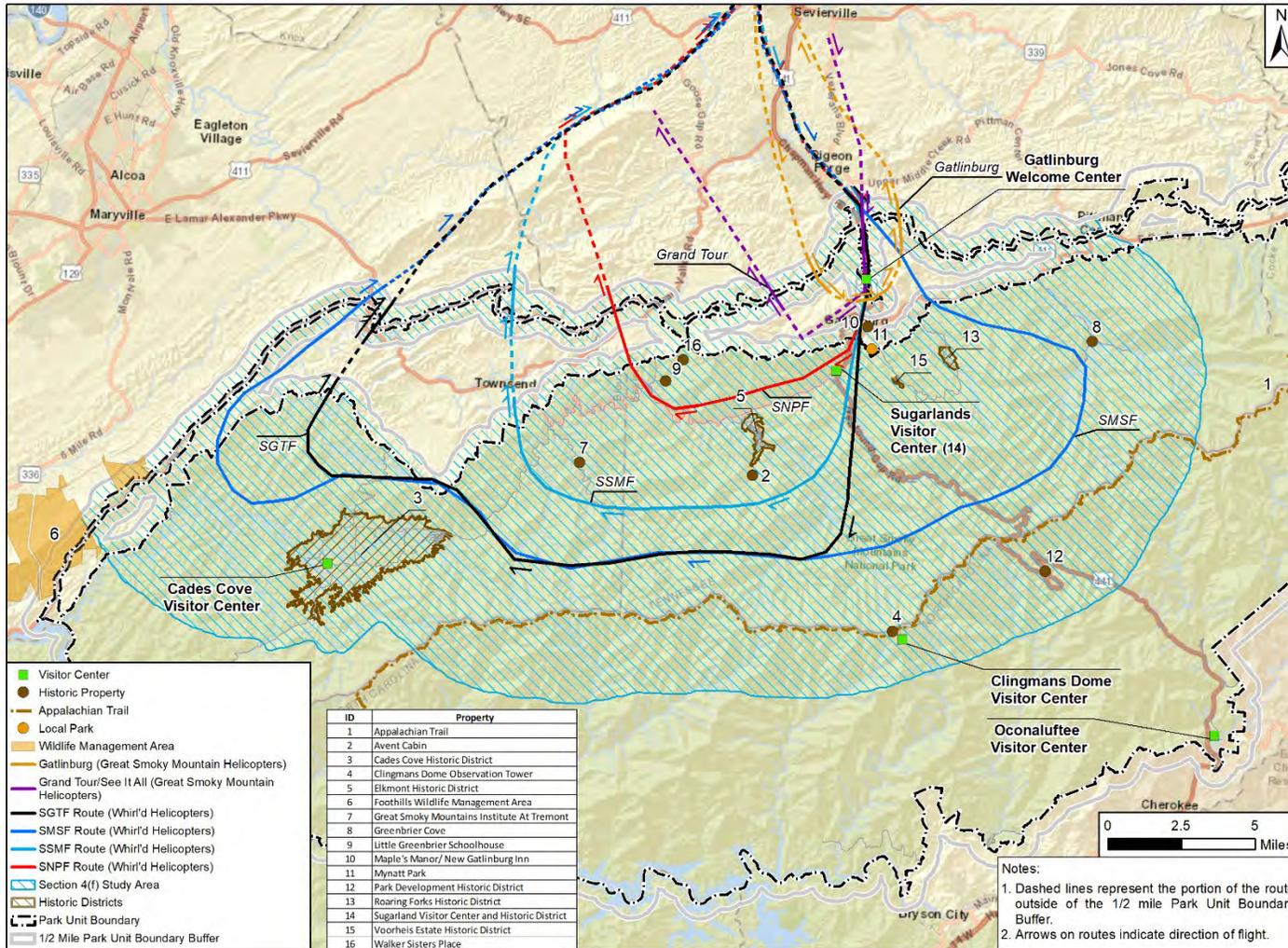
Attachments

- A. Map including proposed Commercial Air Tour Routes, Section 4(f) Study Area, and Section 4(f) Resources

ATTACHMENT A

Map of Proposed Commercial Air Tour Routes, Section 4(f) Study Area, and Section 4(f) Resources

Section 4(f) Study Area and Properties for ATMP at Great Smoky Mountains National Park



[REDACTED]

From: ATMPTeam
Sent: Thursday, November 10, 2022 2:30 PM
To: [REDACTED]
Subject: FW: Section 4(f) Consultation - Air Tours at Great Smoky Mountains National Park - Mynatt Park

Hi [REDACTED] is this it?

From: Cindy Ogle [REDACTED]
Sent: Monday, June 20, 2022 11:38 AM
To: ATMPTeam <ATMPTeam@dot.gov>
Subject: RE: Section 4(f) Consultation - Air Tours at Great Smoky Mountains National Park - Mynatt Park

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Dear Mr. Elmore,
The City of Gatlinburg has reviewed the Preliminary findings letter for the referenced ATMP. The City concurs with the findings that the ATMP would not result in either significant impact or substantial impairment of the City's 4(f) resource, Mynatt Park, and therefore, the determination of no constructive use of Mynatt Park.

Sincerely,

Cindy C. Ogle
City Manager

From: ATMPTeam <ATMPTeam@dot.gov>
Sent: Wednesday, June 15, 2022 8:13 AM
To: Cindy Ogle [REDACTED]
Cc: Elmore, Eric <FAA> <eric.elmore@faa.gov>; ATMPTeam <ATMPTeam@dot.gov>
Subject: RE: Section 4(f) Consultation - Air Tours at Great Smoky Mountains National Park - Mynatt Park

Dear Cindy Ogle,

This email serves as a reminder to please provide any feedback on the Federal Aviation Administration's preliminary findings in accordance with Section 4(f) of the U.S. Department of Transportation Act (Section 4(f)) related to potential impacts to Mynatt Park, which is a protected property under Section 4(f), by June 21st (see email below).

Should you have any questions regarding any of the above, please contact Eric Elmore at 202-267-8335 or eric.elmore@faa.gov and copy the ATMP team at ATMPTeam@dot.gov.

From: ATMPTeam
Sent: Thursday, June 9, 2022 8:46 AM
To: [REDACTED]
Cc: Elmore, Eric <FAA> <eric.elmore@faa.gov>; ATMPTeam <ATMPTeam@dot.gov>
Subject: Section 4(f) Consultation - Air Tours at Great Smoky Mountains National Park - Mynatt Park

Dear Cindy Cameron Ogle,

The Federal Aviation Administration (FAA), in cooperation with the National Park Service (NPS), is developing an Air Tour Management Plan (ATMP) for the Olympic National Park (Park). The FAA is preparing documentation for the ATMP in accordance with the National Parks Air Tour Management Act (NPATMA) and other applicable laws, including Section 4(f) of the U.S. Department of Transportation Act (Section 4(f)). The purpose of the attached letter is to coordinate with you on FAA's preliminary findings related to the ATMP's potential impacts to Mynatt Park, which is a protected property under Section 4(f).

We request that you review the attached letter and respond with any concerns or need for further consultation on the FAA's proposed no substantial impairment finding within fourteen days of receiving this email.

Should you have any questions regarding any of the above, please contact Eric Elmore at 202-267-8335 or eric.elmore@faa.gov and copy the ATMP team at ATMPTeam@dot.gov.

APPENDIX E

Endangered Species Act: Section 7 Compliance Documentation



Tennessee Ecological Services Field Office

FWS Log No: 2022-0030312

The Service concurs with your effect determination(s) for resources protected by the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). This finding fulfills the requirements of the Act. If project design changes are made or new information becomes available, please submit new plans for review.

Field Supervisor

Date



United States Department of the Interior
NATIONAL PARK SERVICE
Natural Resource Stewardship & Science
Natural Sounds and Night Skies Division



United States Department of Transportation
FEDERAL AVIATION ADMINISTRATION
Office of Policy, International Affairs & Environment
Office of Environment and Energy

NATIONAL PARKS AIR TOUR MANAGEMENT PROGRAM

March 28, 2022

Daniel Elbert, Field Supervisor
U.S. Fish and Wildlife Service
Tennessee Ecological Services Field Office
446 Neal Street
Cookeville, Tennessee 38501

Re: Informal Section 7 Consultation for Great Smoky Mountains National Park Air Tour Management Plan (PEPC #100689)

Dear Mr. Elbert,

The Federal Aviation Administration (FAA), in cooperation with the National Park Service (NPS) (collectively, the agencies), is developing an Air Tour Management Plan (ATMP) for Great Smoky Mountains National Park (the Park). The agencies are preparing documentation for the ATMP in accordance with the National Parks Air Tour Management Act (NPATMA) and other applicable laws. This letter is a request for informal consultation with your office by the agencies pursuant to Section 7 of the Endangered Species Act (the Act). We are seeking your concurrence that the proposed action in the ATMP will not adversely affect threatened and endangered species or critical habitat occurring within the Park. We are also requesting your technical input on potential impacts of the action on tri-colored bats, little brown bats, bald eagles, and birds of conservation concern. This matter is time sensitive as the agencies are under a court order to complete an ATMP at this Park and 22 other parks within two years, as explained below.

Project Background and Purpose of the Action

NPATMA (Public Law 106-181, codified at 49 U.S.C. § 40128) of 2000, directs the agencies to develop ATMPs for commercial air tour operations over units of the national park system. A commercial air tour operation is defined as "a flight conducted for compensation or hire in a powered aircraft where the purpose of the flight is sightseeing over a national park, within ½ mile outside the boundary of a national park or over tribal lands¹, during which the aircraft flies below an altitude of 5,000 feet (ft.) above ground level (AGL) or less than 1 mile laterally from any geographic feature within the park (unless more than ½ mile outside the boundary)." When NPATMA was passed in 2000, existing air tour operators were permitted to continue air tour operations in parks until an ATMP was completed. To facilitate this

¹ Defined by NPATMA as "...Indian country (as that term is defined in section 1151 of title 18) that is within or abutting a national park."

continued use, FAA granted Interim Operating Authority (IOA) to existing air tour operators. IOA set an annual limit of the number of flights per operator for each park. In 2012, NPATMA was amended by Congress to require operators to report the number of flights conducted on a quarterly interval each year. On February 14, 2019, Public Employees for Environmental Responsibility and the Hawai'i Coalition Malama Pono filed a petition for writ of mandamus seeking to have the agencies complete air tour management plans or voluntary agreements at seven specified parks, *In re Public Employees for Environmental Responsibility, et al.*, Case No. 19-1044 (D.C. Cir.). On May 1, 2020, the United States Court of Appeals for the District of Columbia Circuit granted the petition and ordered the agencies to file a proposed schedule for bringing twenty-three eligible parks, including Great Smoky Mountains National Park, into compliance with NPATMA within two years. The agencies submitted a plan to complete all ATMPs to the court on August 31, 2020.

Past and Current Commercial Air Tour Activity

Table 1 lists the current commercial air tour activity at the Park based on data reported to the agencies.

Table 1 Current Commercial Air Tour Activity

Interim Operating Authority (flights per year)	Current Above Ground Altitude	Average Total Annual Flights (2017-2019)
1,920	1,000 – 1,500 feet	946

Under existing conditions, the flights could potentially more than double up to IOA (noted in Table 1) in the absence of an ATMP.

Description of Proposed Action

Attachment 1, *Draft Air Tour Management Plan Great Smoky Mountains National Park*, provides a description of the proposed action. Key elements of the Draft ATMP are summarized below:

- Authorizes two existing operators to conduct a total of 946 annual commercial air tours over the Park using specified helicopters (BHT-206-L1 and BHT-206- B). The total number of air tours that

would be authorized under the ATMP is consistent with the existing air tours reported over the Park but is less than the IOA (Table 1).

- Establishes six designated air tour routes over the Tennessee side of the Park (see Attachment 1, Figure 2).
- Establishes a minimum flight altitude of 2,600 feet above ground level (AGL) for commercial air tours over the Park.
- Establishes the number of air tours that the operators may conduct each day. On Standard Days, a total of 5 air tours may be conducted per day. On Flex Days, a total of 7 air tours may be conducted per day. The operators are each authorized up to 40 Flex Days per year.
- Limits the number of annual air tour flights to 26 on the Black Route and 17 on the Blue Route.
- No commercial air tour takes off or landings would occur inside or adjacent to the Park.
- Aircraft would not be able to hover or loop while conducting commercial air tours over the Park.
- Air tours may operate two hours after sunrise until two hours before sunset. If the operators have converted to quiet technology aircraft, the operators would be allowed to conduct tours beginning at sunrise or ending at sunset on all days that flights are authorized.

Action Area

The action area includes portions of the Park and areas within a ½-mile boundary from the Park that would be affected by helicopter noise associated with the proposed action. The area affected by noise is defined as all areas encompassed by the time above 35 A-weight decibel (dBA) contours depicted in Attachment 2, *Noise Technical Analysis*, Figure 2. Please refer to Attachment 2 for more information on noise metrics and units.

Summary of Conservation Measures

The proposed action would include the following conservation measures for all operators:

- Air tours may operate two hours after sunrise until two hours before sunset. This measure would reduce impacts to bats. If the operators have converted to quiet technology aircraft, the operators would be allowed to conduct tours beginning at sunrise or ending at sunset on all days that flights are authorized.
- Aircraft will not hover or loop while conducting air tours over the Park. This measure would minimize the time individual animals would be exposed to helicopter noise.
- Aircraft will not fly below an altitude of 2,600 feet AGL, which is an increase of 1,100 to 1,600 feet compared to existing operations. This increase in altitude would reduce noise intensity at ground level. When the altitude of an aircraft is increased, the total area of noise exposure from the aircraft may also increase depending on the surrounding terrain. However, because increases in altitude also result in a reduction in maximum sound level of the aircraft in areas nearby the flight track, the beneficial effects of increasing the altitude of commercial air tours are anticipated to outweigh the *de minimis* impacts from any increase in the area exposed to the noise.

- Limits the number of annual air tour flights to 26 on the Black Route and 17 on the Blue Route. This measure minimizes the number of air tour noise events in some of the more remote areas of the Park.

Listed Wildlife and Critical Habitat Potentially Occurring in the Action Area

The proposed action does not involve ground-based activities or other activities with the potential to impact plants. Therefore, the proposed action would have no effect on plants and plants are not addressed further in this document. The agencies reviewed information in the U.S. Fish and Wildlife Service’s Information Planning and Consultation system and Park-specific information to identify federally list wildlife potentially occurring in the action area, as well as species that have been petitioned for listing (status under review), candidate species, and designated critical habitat (Table 2).

Table 2 Listed Wildlife and Critical Habitat Potentially Occurring in the Action Area

Scientific Name	Common Name	Federal Status	Critical Habitat in Park
Mammals			
<i>Glaucomys sabrinus coloratus</i>	Carolina northern flying squirrel	Endangered	No
<i>Myotis septentrionalis</i>	Northern long-eared bat	Threatened	No
<i>Myotis sodalis</i>	Indiana bat	Endangered	Yes. Whiteoak Blowhole.
<i>Perimyotis subflavus</i>	Tri-colored bat	Under Review	No.
<i>Myotis lucifugus</i>	Little brown bat	Under Review	No
Scientific Name	Common Name	Fed Status	Notes
Fishes			
<i>Ethostoma sitikuense</i>	Citico darter	Endangered	No
<i>Noturus baileyi</i>	Smoky madtom	Endangered	No
<i>Noturus flavipinnis</i>	Yellowfin madtom	Threatened	No
Arachnids			
<i>Microhexura montivaga</i>	Spruce-fir moss spider	Endangered	Yes. Above 5,400 feet.
Moths/Butterflies			
<i>Danaus plexippus</i>	Monarch butterfly	Candidate	No

Potential Stressors Associated with the Proposed Action

The agencies deconstructed the proposed action to identify potential stressors that may affect listed species or critical habitat, if exposed. The proposed action (see Attachment 1) does not include ground-based activities. Therefore, potential stressors would be associated with helicopter overflights above 2,600 feet AGL and would be limited to helicopter noise and helicopter strikes.

Overview of Helicopter Noise Associated with the Proposed Action

The overall number of annual flights that would be authorized under the ATMP is consistent with existing operations. However, the ATMP includes several provisions to minimize potential noise impacts, as outlined above in the Description of Proposed Action and Conservation Measures sections. As a

result, the intensity of potential noise exposures would decrease under the proposed action compared to existing operations. The ATMP would ensure that noise would not be constant and that there would be substantial time intervals between noise events from air tours by limiting the number of flights each day. The ATMP also ensures that large segments of the Park would not be exposed to air tour noise by establishing designated air tour routes.

The agencies conducted noise modeling to estimate noise produced by commercial air tours under the proposed action (Attachment 2, *Noise Technical Analysis*). The model was based upon a 'busy' day of air tours, defined as the 90th percentile, in this case five air tours in a single day. In summary, the noise modeling predicts that the maximum sound pressure level (L_{max}) generated by commercial air tours in the Park would be between 65 to 70 dBA. As shown in Attachment 2, Figure 6, a relatively small area (161 acres) would be exposed to an L_{max} of 65 to 70 dBA. The L_{max} noise metric is event based and does not provide any context of frequency, duration, or timing of exposure. The time above (TA) noise metric specifies the amount of time (in minutes) aircraft sound levels would be above a given noise level during a 24-hour period. TA_{35dBA} and TA_{52dBA} were modeled for the proposed action. Based on the modeling, aircraft noise levels above 35 dBA (TA_{35dBA}) on this 'busy' day are predicted to occur for no more than 35 minutes (non-contiguous) in areas directly under and adjacent to the air tour routes and aircraft noise levels above 52 dBA (TA_{52dBA}) are predicted to occur for no more than 5 minutes (non-contiguous) (see Attachment 2, Figures 2 and 3).

In addition, the agencies' noise modeling determined the average air tour sound pressure levels over a 12-hour period ($L_{Aeq, 12hr}$) for this 'busy' day would be below 35 dBA for most of the action area and below 40 dBA for the entire action area (see Attachment 2, Figures 4 and 5). The estimated natural ambient (L_{50}) for the Park ranges from 25- 30 dBA for forested areas and 30-35 for grassland areas, while the measured and estimated existing ambient (L_{50}) for the Park ranges from 30 -40 dBA depending upon location (Lee et al 2016). Figure 1 provides a comparison of common indoor and outdoor sounds and their approximate noise levels for context.

The FAA has established a significance threshold for noise that uses the day-night average sound level (DNL) metric (see FAA Order 1050.1F, Exhibit 4-1). The resultant DNL due to the ATMP is well below the FAA's threshold within the Park boundary and ½-mile buffer. As described in the *Noise Technical Analysis* (Attachment 2), contours for L_{Aeq} show the average sound levels were below 40 dBA for the proposed action modeled at the Park; and DNL will be arithmetically three dBA lower than $L_{Aeq, 12hr}$ as there are no nighttime events at the Park.

Figure 1 compares common outdoor and indoor sound levels for context.



Figure 1 comparative Noise Levels (Source: FAA 2020)

Species with No Effect Determinations

The agencies have determined that the proposed action would have no effect on the Citico darter, smoky madtom, yellowfin madtom, spruce-fir moss spider, and monarch butterfly. Although these species could be exposed to audible helicopter noise, the frequency and magnitude of noise exposure would not be expected to elicit a biologically meaningful response from these species. The conservation measures included in the proposed action would ensure that the intensity of the noise associated with commercial air tours is limited.

Furthermore, there is no chance for the listed fishes or spruce-fir moss spiders to be struck by a helicopter. Doppler radar has shown that during migration monarch butterflies travel most of the time at around 800-1,200 feet high (Sarikonda 2014). With a minimum altitude of 2,600 feet AGL for air tour flights, the agencies do not expect helicopter strikes to be a stressor to monarchs. These species are not addressed in further detail. The agencies have also determined that the proposed action would have no effect on critical habitat for the spruce-fir moss spider. Critical habitat has not been designated in the Park for listed fishes or the monarch butterfly.

Indiana, Northern Long-eared, Tri-colored, and Little Brown Bats

Indiana, northern long-eared, tri-colored, and little brown bats winter in caves. Collectively, 10 known hibernacula for these species exist in the action area. Bull, Gregory, Rainbow, Rich Mountain, Saltpeter, Scott, Snake Dance, Stupkas, and Whiteoak Blowhole caves are inside the Park and Kelly Ridge Cave is 0.25 miles outside the Park. Suitable summer roosting habitat exists for these species in forested areas of the Park below 4,500 feet and foraging habitat exists in forested and open areas below 4,500 feet. Fall swarming habitat for Indiana and northern long-eared bats also exists within a 10-mile radius of known hibernacula. Recent population declines for all four species have primarily been attributed to white-nose syndrome. Whiteoak blowhole, located in the Whiteoak Sinks area of the Park, is designated critical habitat for the Indiana bat.

Helicopter Noise

Bats could be intermittently exposed to commercial air tour noise while wintering in caves or while roosting in trees during spring, summer, or fall. Air tours would be limited to 2 hours after sunrise to 2 hours before sunset, unless the operators have converted to quiet technology aircraft, which would allow for tours beginning at sunrise and ending at sunset. It is unlikely that bats would be exposed to air tour noise while foraging because they are typically active and forage at night. The ATMP's maximum daily flight caps (five flights for Standard Days and seven flights for the Flex Days) would limit the number of times bats could be exposed to noise on a given day. The minimum flight altitude would increase from 1,000 – 1,500 feet AGL to 2,600 feet AGL under the proposed action, which would decrease the intensity of noise exposure.

Potential Effects on Hibernacula. All known hibernacula in the action area, including Whiteoak Blowhole, are about 1 mile or more from the closest air tour routes (Black and Blue Routes). The ATMP would authorize no more than 26 annual flights on the Black Route and 17 annual flights on the Blue Route. Based on modeling (Attachment 2), helicopter noise levels outside the cave entrances are not expected to exceed 35 dBA for more than 5 minutes on a typical busy day. Helicopter noise levels inside the cave would be expected to be less than 35 dBA. Based on the low frequency and magnitude of exposure, air tour noise is not expected to elicit a response from or have any effect on wintering Indiana, northern long-eared, tri-colored, or little brown bats. Similarly, the proposed action would have no effect on Whiteoak Blowhole, which is designated critical habitat for the Indiana bat.

Potential Effects on Roosting Bats. Bats roosting directly beneath or adjacent to the proposed air tour routes could be momentarily exposed to L_{max} noise levels of up to 65 - 70 dBA. However, as outlined in Attachment 2, helicopter noise within the action area is not expected to exceed 52 dBA for more than 5 minutes (non-contiguous) on a typical busy day. A maximum of approximately 112,634 acres of potentially suitable roosting habitat is within the TA_{52dBA} 0- to 5-minute noise contour (Attachment 2, Figure 3) including acres of airspace outside the Park but within the ½ mile boundary of the Park.

Given the relatively low magnitude and slow onset rate of the air tour helicopter noise, it appears unlikely that bats would be aroused or abandon a roost unless the noise were accompanied by visual or tactical cues that may cause a bat to perceive the noise as a threat. Based on the minimum flight altitude of 2,600 feet AGL and the prohibition on hovering, helicopter downwash is not expected to be an issue. Furthermore, it is unlikely that a bat would see an approaching helicopter from a roost. If a bat

were to respond to helicopter noise, it would most likely be a short-term behavioral reaction or short-term physiological response. Based on the relatively low magnitude and frequency of exposure, individual bats would be expected to return to homeostasis and normal behavior shortly after exposure to air tour noise.

Potential Effects on Foraging Bats. Anthropogenic noise has been found to reduce foraging success of bats (e.g., Schaub et al. 2008, Siemers and Schaub 2011, Luo et al. 2015; Bunkley and Barber 2015). As noted above, it is unlikely that foraging bats would be exposed to helicopter noise because air tours would be limited to 2 hours after sunrise to 2 hours before sunset. Some studies suggest that traffic noise and other factors along roadways can affect roost site selection and other behaviors, while other studies suggest that bats tolerate traffic noise (USFWS 2008, USFWS 2018). In a study near I-70 and the Indianapolis Airport, a primary Indiana bat maternity roost was located 1,970 ft. (0.6 km) south of I-70 (3D/International, Inc. 1996 as cited in USFWS 2018). This primary maternity roost was not abandoned despite constant noise from the Interstate and airport runways. Divoll and O'Keefe (2018) also noted that noise did not appear to cause Indiana bats at Indiana International Airport to abandon the study area. In summary, helicopter noise is not expected to affect the fitness of individual bats and any effects would be insignificant.

Helicopter Strikes

Air tours would be limited to 2 hours after sunrise to 2 hours before sunset. Most bats would be roosting in trees during this time of day and the risk of a helicopter striking a bat would be extremely low. If operators convert to quiet technology aircraft, air tours would be allowed beginning at sunrise and ending at sunset. During the summer, bats typically begin foraging flights around dusk, with most foraging being within or beneath the tree canopy. Bats are typically roosted for the day by sunrise. The risk of a helicopter strike would remain extremely low if operators convert to quiet technology aircraft because the minimum flight altitude would be 2,600 feet AGL and most bat flight would be near or below the tree canopy height. Therefore, the likelihood of a helicopter striking a bat is extremely low and the effects are considered discountable.

Effect Determination

Based on the analysis presented above, the agencies have determined that the proposed action *may affect, but is not likely to adversely affect* Indiana, northern long-eared, tri-colored, or little brown bats. The agencies have determined that the proposed action would have *no effect* on critical habitat for the Indiana bat.

Carolina Northern Flying Squirrel

Forested areas in the Park above 4,500 feet elevation are considered potential habitat for the Carolina northern flying squirrel. Critical habitat has not been designated for this species.

Helicopter Noise

The proposed Blue Route crosses over approximately 5 miles of potential Carolina northern flying squirrel habitat and the Black Route crosses over approximately 0.1 miles of potential habitat. If this

habitat is occupied, flying squirrels could be intermittently exposed to air tour noise. The ATMP would authorize no more than 26 annual flights on the Black Route and 17 annual flights on the Blue Route, so potential noise exposures would be infrequent. Based on modeling (Attachment 2), helicopter noise levels in flying squirrel habitat are not expected to exceed 52 dBA for more than 5 minutes on days when the Blue or Black routes are flown.

Carolina northern flying squirrels are nocturnal. As discussed above, no air tour flights would occur from 2 hours before sunset to 2 hours after sunrise. Therefore, flying squirrels would not be exposed to helicopter noise while they are most active and vocal. Flying squirrels spend most daytime hours sleeping or resting in dens, which may include tree cavities, dreys (i.e., external leaf nests in trees), or subterranean dens (Diggins 2016). Given the relatively low magnitude and slow onset rate of the air tour helicopter noise, it appears unlikely that squirrels would be aroused or abandon a den unless the noise were accompanied by visual or tactical cues that may cause a squirrel to perceive the noise as a threat. Based on the minimum flight altitude of 2,600 feet AGL and the prohibition on hovering, helicopter downwash is not expected to be an issue. Furthermore, it is unlikely that a squirrel would see an approaching helicopter because they would most likely be sleeping in a den. If a squirrel were to respond to helicopter noise, it would most likely be a short-term behavioral reaction or short-term physiological response. Based on the relatively low magnitude and frequency of exposure, individual squirrels would be expected to return to homeostasis and normal behavior shortly after exposure to air tour noise. In summary, helicopter noise is not expected to affect the fitness of individual Carolina northern flying squirrels and any effects would be insignificant.

Helicopter Strikes

Carolina northern flying squirrels do not actually fly, they glide, typically no higher than tree top levels. There is no chance a Carolina northern flying squirrel would be struck by an air tour helicopter because the minimum flight altitude is 2,600 feet AGL.

Effect Determination

Based on the analysis presented above, the agencies have determined that the proposed action *may affect, but is not likely to adversely affect* the Carolina northern flying squirrel.

Bald Eagles

Potentially suitable bald eagle nesting and foraging habitat exists within the action area along the West Prong Little Pigeon River. The West Prong exits the Park near the Gatlinburg entrance, flows through downtown Gatlinburg, and reenters the Park at the Gatlinburg Spur, which is part of the Foothills Parkway. The river flows between the north and southbound lanes of the Spur for about 4.2 miles before leaving Park property at Pigeon Forge. Park Resource Management and Science Division staff have observed eagles flying and foraging along the river and in the vicinity of the Gatlinburg Trout Hatchery. Park staff also have reports of an active bald eagle nest in 2021 on a forested ridge about 0.3 miles south of the hatchery (personal communication, Gatlinburg Hatchery Manager). The reported nest is outside the Park, about 0.25 miles east of the Gatlinburg Bypass and about 0.35 miles southeast of the Spur/Gatlinburg Bypass intersection.

Helicopter Noise

The proposed blue, red, purple, and black air tour routes cross over and generally follow the Spur and West Prong where bald eagles may nest and forage. Therefore, foraging and nesting eagles would likely be exposed intermittently to audible air tour noise. The U.S. Fish and Wildlife Service National Bald Eagle Management Guidelines (USFWS 2007) recommend not operating aircraft within 1,000 feet of a nest during the breeding season, except where eagles have demonstrated tolerance for such activity. The minimum air tour flight altitude of 2,600 feet AGL is expected to avoid disturbance of nesting and foraging bald eagles because it exceeds the guideline by 1,600 feet.

Helicopter Strikes

As noted above portions of the blue, red, purple, and black air tour routes would be located above bald eagle nesting and foraging habitat along the West Prong. Therefore, some chance exists for bald eagle-aircraft collisions. Washburn et al. (2015) analyzed data for 200 bald eagle-aircraft strikes and found 63% occurred at or below 98 feet AGL, 83% occurred at or below 1,000 feet AGL, and fewer than 2% occurred over 3,000 feet AGL. Not unexpectedly, the highest numbers of bald eagle-aircraft collisions occurred in geographic areas with high densities of bald eagles (e.g., Alaska, Florida, and Chesapeake Bay). The FAA Wildlife Strike Database (FAA 2022), which contains records of reported wildlife strikes since 1990, only has one record of a bald eagle-aircraft strike in Tennessee (Lovell Field, Chattanooga, 2019, fixed-wing aircraft). Given the minimum air tour flight altitude of 2,600 feet AGL, maximum of 946 annual air tour flights, and the relatively low density of bald eagles in the action area, the likelihood of an air tour helicopter striking a bald eagle is extremely low.

Birds of Conservation Concern

The action area includes potential habitat for a variety of migratory birds, including 36 birds of conservation concern that could nest, forage, or migrate through the action area.

Helicopter Noise

All proposed air tour routes cross over potential nesting, foraging, or migration habitat for some birds of conservation concern. Therefore, some species would likely be exposed intermittently to audible air tour noise. As discussed above for other species, the minimum flight altitude of 2,600 feet AGL and other provisions of the Draft ATMP would limit bird exposure to air tour noise. Based on the relatively low magnitude and frequency of exposure, individual birds exposed to air tour noise would be expected to return to homeostasis and normal behavior shortly after exposure. Helicopter noise is not expected to affect the fitness of individual birds of conservation concern and any effects would be insignificant.

Helicopter Strikes

As noted above, all proposed air tour routes cross over potential habitat for some birds of conservation concern. Therefore, some chance exists for bird-aircraft collisions. FAA data indicate that most (about 95%) bird-aircraft strikes occur during takeoff or landing (FAA 2021). Air tour helicopters would not takeoff or land in the action area. For both commercial transport and general aviation aircraft, 71 percent of bird strikes occurred at or below 500 feet AGL from 1990 to 2020 and 89% occurred at or

below 2,500 feet AGL. Given the minimum air tour flight altitude of 2,600 feet AGL and maximum of 946 annual air tour flights the likelihood of an air tour helicopter striking a bird of conservation concern is low.

Conclusions

As indicated above, the proposed action would designate routes, require minimum altitudes, establish time of day restrictions, and limit the number of air tours conducted daily and annually. The measures enumerated above incorporated into the ATMP would serve to avoid and minimize possible effects to listed species and their critical habitat. Based on the analysis that all effects of the proposed action would be insignificant or discountable, the agencies have determined that the proposed action *may affect, but is not likely to adversely affect* the Indiana bat, northern long-eared bat, tri-colored bat, little brown bat, or Carolina northern flying squirrel. The agencies have determined that the proposed action would have *no effect* on critical habitat for the Indiana bat.

Thank you very much for your help and support. If you have questions or need more information, please contact Dr. Lisa McInnis, Chief, Resource Management and Science Division at Great Smoky Mountains National Park (lisa_mcinnis@nps.gov) or Michelle Carter, Environmental Protection Specialist, (michelle_carter@nps.gov) at the NPS who is helping coordinate overall Section 7 consultations for ATMPs on behalf of the agencies.

Sincerely,

LISA

MCINNIS

Digitally signed by

LISA MCINNIS

Date: 2022.04.04

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Alan Sumeriski, Acting Superintendent for Great Smoky Mountains National Park

KEVIN W.

WELSH

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KEVIN W. WELSH

Date: 2022.03.25

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Kevin Welsh, Executive Director, Office of Environment and Energy, Federal Aviation Administration

Attachment 1 - Air Tour Management Plan Great Smoky Mountains National Park

Attachment 2 – Noise Technical Analysis

Literature Cited

- 3D/International, Inc. (1996). 3D/International, Inc. 1996. 1996 Field Studies for Interim Mitigation for Impacts to Indiana bats at the Indianapolis International Airport in Marion County, Indiana. 125pp.
- Bunkley J.P. and Barber J.R. (2015). Noise reduces foraging efficiency in pallid bats (*Antrozous pallidus*). *Ethology*, 121, 1116–1121.
- Diggins, C.A. (2016). Determining Habitat Associations of Virginia and Carolina Northern Flying Squirrels in the Appalachian Mountains from Bioacoustic and Telemetry Surveys. Dissertation submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Fish and Wildlife. Blacksburg, VA.
- Divoll, T.J. and O’Keefe, J.M. (2018). Airport Expansion and Endangered Bats: Development and Mitigation Actions Near the Indianapolis International Airport. *Transportation Research Record*, 2672(29), 12-22.
- Federal Aviation Administration (FAA). (2020). Fundamentals of Noise and Sound. https://www.faa.gov/regulations_policies/policy_guidance/noise/basics/ as accessed August 30, 2021.
- FAA. (2021). Wildlife strikes to civil aircraft in the United State, 1990-2020. FAA Wildlife Strike Database Serial Report Number 27. Office of Airport Safety and Standards, Washington DC.
- FAA. (2022). FAA Wildlife Strike Database. <https://wildlife.faa.gov/home> as accessed February 15, 2022.
- Lee, C., MacDonald, J., Scarpone, C. and Rapoza, A. (2016). Great Smoky Mountains National Park baseline ambient sound levels 2005 and 2006. DOT-VNTSC-FAA-16-21, DOT/FAA/AEE/2016-10. Federal Aviation Administration and National Park Service.
- Luo J., Siemers B.M. and Koselj K. (2015). How anthropogenic noise affects foraging. *Global Change Biology*, 21, 3278–3289.
- Schaub A., Ostwald J. and Siemers B.M. (2008). Foraging bats avoid noise. *Journal of Experimental Biology*, 211, 3174–3180.
- Siemers B.M. and Schaub A. (2011). Hunting at the highway: traffic noise reduces foraging efficiency in acoustic predators. *Proceedings of the Royal Society of London B Biological Sciences*, 278, 1646–1652.
- Sarikonda, C. (2014). Fall Migration - How do they do it? <https://monarchjointventure.org/blog/fall-migration-how-do-they-do-it> as accessed August 30, 2021.

U.S. Fish and Wildlife Service (USFWS). (2007). National Bald eagle management guidelines.

USFWS. (2008). Biological Opinion on the proposed construction, operation, and maintenance of the Fort Drum Connector Project (NYSDOT PIN 7804.26) for the federally endangered Indiana bat (*Myotis sodalis*). U.S. Fish and Wildlife Service, Cortland, New York.

USFWS. (2018). Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat. U.S. Fish and Wildlife Service, Midwest Regional Office. Bloomington, Minnesota.

Washburn, B.E., Begier, M.J. and Wright, S.E. (2015). Collisions between eagles and aircraft: an increasing problem in the airport environment. USDA National Wildlife Research Center – Staff Publications. 1721. https://digitalcommons.unl.edu/icwdm_usdanwrc/1721

1 **AIR TOUR**
2 **MANAGEMENT PLAN**
3 **GREAT SMOKY MOUNTAINS NATIONAL PARK**

4 **SUMMARY**

5 This Air Tour Management Plan (ATMP) provides the terms and conditions for
6 commercial air tours conducted over Great Smoky Mountains National Park (Park)
7 pursuant to the National Parks Air Tour Management Act (Act) of 2000.

8 **1.0 INTRODUCTION**

9 The Act requires that commercial air tour operators conducting or intending to conduct
10 commercial air tours over a unit of the National Park System apply to the Federal
11 Aviation Administration (FAA) for authority before engaging in that activity. The Act
12 further requires that the FAA in cooperation with the National Park Service (NPS)
13 establish an ATMP for each National Park System unit for which one or more
14 applications has been submitted, unless that unit is exempt from this requirement.¹

15 The objective of this ATMP is to develop acceptable and effective measures to mitigate
16 or prevent the significant adverse impacts, if any, of commercial air tours on natural and
17 cultural resources, visitor experiences and tribal lands.

18 **2.0 APPLICABILITY**

19 This ATMP applies to all commercial air tours over the Park and commercial air tours
20 within ½ mile outside the boundary of the Park, as depicted in Figure 1 below. A
21 commercial air tour subject to this ATMP is any flight, conducted for compensation or
22 hire in a powered aircraft where a purpose of the flight is sightseeing over the Park,
23 during which the aircraft flies:

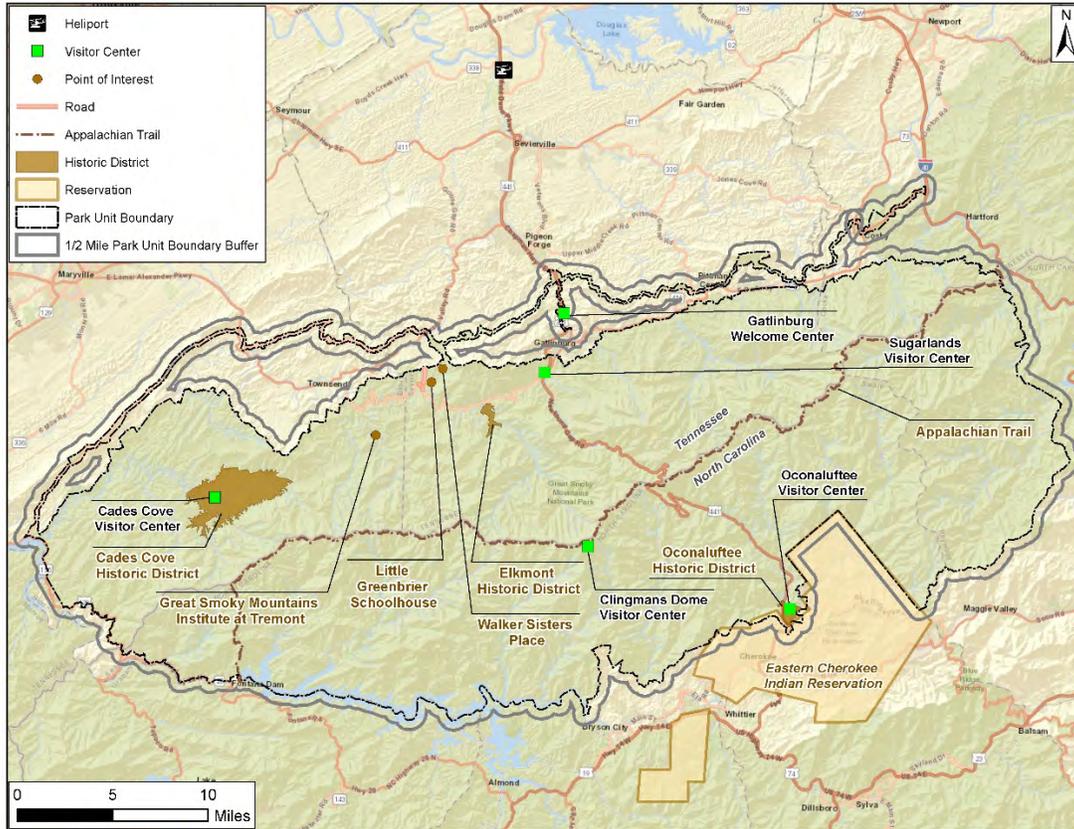
24 (1) Below 5,000 feet above ground level (except solely for the purposes of takeoff
25 or landing, or necessary for safe operation of an aircraft as determined under the
26 rules and regulations of the FAA requiring the pilot-in-command to take action to
27 ensure the safe operation of the aircraft); or

28 (2) Less than one mile laterally from any geographic feature within the Park
29 (unless more than ½-mile outside the Park boundary).

30 *See* 14 CFR § 136.33(d).

31

¹ The Act provides an exemption to the ATMP requirement for parks with 50 or fewer commercial air tour operations each year unless the exemption is withdrawn by the Director of NPS. *See* 49 U.S.C. § 40128(a)(5). As an alternative to an ATMP, the agencies also have the option to prepare a voluntary agreement for the Park.



32

33 **Figure 1.** Map of area subject to this ATMP for Great Smoky Mountains National Park

34 2.1 Park Overview

35 World renowned for its diversity of plant and animal life, the beauty of its ancient
 36 mountains, and its remnants of Southern Appalachian mountain culture, the Park is
 37 America's most visited national park with over 12 million visitors per year. The Park is
 38 located in the Southern Appalachian Mountains and straddles the border between North
 39 Carolina and Tennessee. The Park comprises a total of 522,000 acres, of which 464,544
 40 acres are recommended and proposed wilderness, representing approximately 89% of the
 41 Park. The Park provides habitat for numerous federally threatened and endangered
 42 species, including the Carolina northern flying squirrel, gray bat, northern long-eared bat,
 43 and Indiana bat, as well as sensitive species such as the bald eagle and peregrine falcon.

44 The Appalachian National Scenic Trail, a separate National Park System unit, runs
 45 through the Park. The Appalachian National Scenic Trail is a cultural resource eligible
 46 for inclusion on the National Register of Historic Places (National Register). The Park
 47 contains numerous other National Register eligible or listed cultural resources, including
 48 the following listed sites:

- 49 • Cades Cove Historic District (National Register Listed - 1977): The Cades Cove
 50 Historic District protects and interprets European-American settlements that
 51 occurred between 1818 and 1821. Native American presence in the area extends
 52 back centuries. The Cades Cove Historic District offers the widest variety of

53 historic buildings of any area in the Park. It is also known for the large numbers
54 of white-tailed deer frequently seen in the area, and sightings of black bear,
55 coyote, groundhog, turkey, raccoon, and skunk, many of which were historically
56 hunted by the Cherokee Indians. Approximately 2.1 million visitors spent time
57 experiencing the Cades Cove Historic District in 2019.

- 58 • Elkmont Historic District (National Register Listed - 1994): The Elkmont Historic
59 District protects and interprets eighteen of the cabins associated with the
60 Appalachian Club. Nearly 90,000 registered visitors camped at Elkmont
61 Campground in 2019.
- 62 • Walker Sisters Place (National Register Listed - 1976): This historic site protects
63 and interprets a late 19th century homestead.
- 64 • Little Greenbrier Schoolhouse (National Register Listed - 1976): This historic site
65 protects and interprets a late 19th/early 20th century mountain schoolhouse.
66 Interpretive events are regularly scheduled throughout the year to allow visitors to
67 participate with a former school teacher who provides lessons about life for the
68 students and families that once lived in the area.

69 The Park also offers outdoor experiential education programs at the Great Smoky
70 Mountains Institute at Tremont (Tremont).

71 Tribal reservation lands of the Eastern Band of the Cherokee Indian tribe are adjacent to
72 the Park in North Carolina.

73 The purposes of the Park are to preserve a vast expanse of the southern Appalachian
74 Mountains ecosystem including its scenic beauty, extraordinary diversity of natural
75 resources, cultural resources, and rich human history, that together provide opportunities
76 for the enjoyment and inspiration of present and future generations. The following Park
77 management objectives related to ATMP development will ensure:

- 78 • Park acoustic resources (i.e. sounds within the Park) are in a natural condition and
79 support an outstanding visitor experience and opportunities to hear and enjoy
80 natural sounds.
- 81 • Acoustic resources of the Park are maintained such that wilderness character
82 (solitude or primitive and unconfined recreation, including remoteness from sights
83 and sounds; untrammled or wildness; naturalness; undeveloped; other features or
84 values) is preserved.
- 85 • Park staff can conduct, and visitors are able to experience, interpretive
86 programming with minimal interference due to noise.
- 87 • Natural sounds are protected to conserve healthy and robust wildlife populations.
88 Natural biological and ecological processes should dominate the sounds within
89 the Park.
- 90 • Inappropriate or excessive types and levels of noise are prevented from
91 unacceptably impacting the ability of the soundscape to transmit the cultural and
92 historic resource sounds, as well as the visitor's experience of those resources.
93

94 **3.0 CONDITIONS FOR THE MANAGEMENT OF COMMERCIAL AIR TOUR**
95 **OPERATIONS AT THE PARK**

96 3.1 Annual Commercial Air Tours Authorized

97 Under this ATMP, 946 annual commercial air tours are authorized. Appendix A
98 identifies the operators authorized to conduct commercial air tours and annual flight
99 allocations.

100 3.2 Commercial Air Tour Routes and Altitudes

101 Commercial air tours authorized under this ATMP shall be conducted on designated air
102 tour routes specific to each operator (Figure 2; Appendix B contains an enlarged Figure
103 2) and as described below:

104 Whirl'd Helicopters, Inc.:

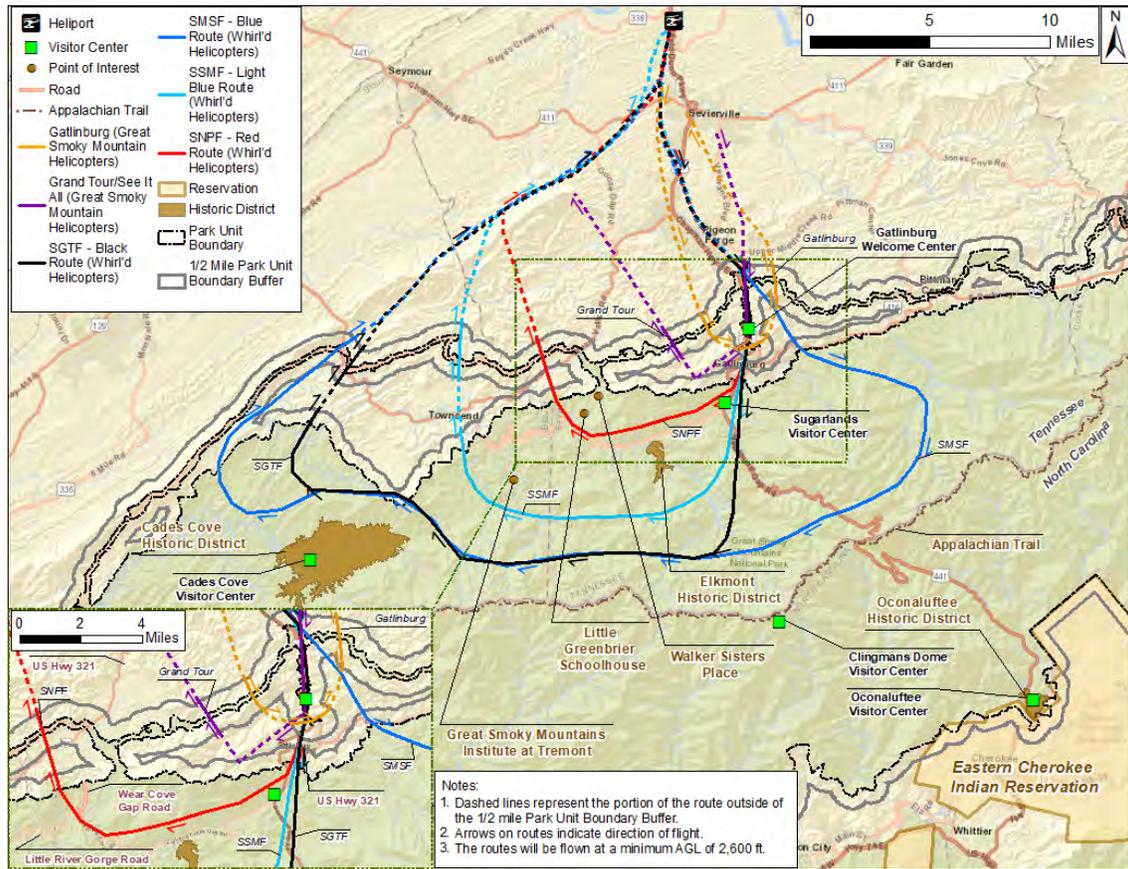
- 105 • Red Route (SNPF): Air tours along the Red Route (SNPF) will follow the road
106 corridors of Highway 321, Highway 441, Little River Road, and Wear Cove Gap
107 Road. As this route turns north to exit the Park, the route will fly west of Wear
108 Cove Gap Road.
- 109 • Light Blue Route (SSMF): Air tours along the Light Blue Route (SSMF) will
110 enter the Park following along the road corridors of Highway 321 and Highway
111 441. Air tours on the Light Blue Route (SSMF) will stay at least one-mile south
112 of the Elkmont Historic District and Tremont.
- 113 • Black Route (SGTF): Air tours along the Black Route (SGTF) will enter the Park
114 following along the road corridors of Highway 321 and Highway 441. Air tours
115 will stay at least one-half mile north of the Appalachian National Scenic Trail and
116 one mile north of Cades Cove Historic District.
- 117 • Blue Route (SMSF): Air tours along the Blue Route (SMSF) will stay at least
118 one-half mile north of the Appalachian National Scenic Trail and one mile north
119 of Cades Cove Historic District.

120 Great Smoky Mountain Helicopter Inc.:

- 121 • Orange Route (Gatlinburg): Air tours along the Orange Route (Gatlinburg) will
122 cross over the Foothills Parkway west of Gatlinburg, head east over the Hwy 321
123 spur of the Foothills Parkway, and then exit back over the Foothills Parkway east
124 of Gatlinburg. This route will only overfly the Foothills Parkway and will stay at
125 least ½ mile outside of the remainder of the Park.
- 126 • Purple Route (Grand Tour/See It All): Air tours along the Purple Route (Grand
127 Tour/See It All) will fly over the Foothills Parkways along the Hwy 321 spur
128 heading south. The tour routes will then head west and exit the Park west of
129 Gatlinburg. This route will only overfly the Foothills Parkway and will stay at
130 least ½ mile outside of the remainder of the Park.

131 Altitude expressed in units above ground level (AGL) is a measurement of the distance
132 between the ground surface and the aircraft. At the Park, air tours will fly no lower than
133 2,600 feet (ft.) AGL. Except in an emergency or to avoid unsafe conditions, or unless

134 otherwise authorized for a specified purpose, operators may not deviate from these routes
135 and altitudes.



136

137 **Figure 2.** Commercial air tour routes at Great Smoky Mountains National Park

138 3.3 Aircraft Type

139 The aircraft types authorized to be used for commercial air tours are identified in
140 Appendix A. Any new or replacement aircraft must not exceed the noise level produced
141 by the aircraft being replaced. In addition to any other applicable notification
142 requirements, operators will notify the FAA and the NPS in writing of any prospective
143 new or replacement aircraft and obtain concurrence before initiating air tours with the
144 new or replacement aircraft.

145 3.4 Day/Time

146 Except as provided in the section below entitled “Quiet Technology Incentives,” air tours
147 may operate two hours after sunrise until two hours before sunset, as defined by the
148 National Oceanic and Atmospheric Administration (NOAA).² Air tours may operate any

² Sunrise and sunset data is available from the NOAA Solar Calculator, <https://www.esrl.noaa.gov/gmd/grad/solcalc/>

149 day of the year, except under circumstances provided in the following section entitled
150 “Restrictions for Particular Events.”

151 3.5 Restrictions for Particular Events

152 The NPS can establish temporary no-fly periods that apply to air tours for special events
153 or planned Park management. Absent exigent circumstances or emergency operations,
154 the NPS will provide a minimum of one month notice to the operators in writing in
155 advance of the no-fly period. Events may include tribal ceremonies or other similar
156 events.

157 3.6 Required Reporting

158 Operators will submit to the FAA and the NPS semi-annual reports regarding the number
159 of commercial air tours over the Park that are conducted by the operator. These reports
160 will also include the flight monitoring data required under Section 5.1 of this ATMP and
161 such other information as the FAA and the NPS may request. Reports are due to both the
162 FAA and the NPS no later than 30 days after the close of each reporting period.
163 Reporting periods are January 1 through June 30 and July 1 through December 31.
164 Operators shall adhere to the requirements of any reporting template provided by the
165 agencies.

166 3.7 Additional Requirements

167 3.7A Operator Training and Education: When made available by Park staff,
168 operators/pilots will take at least one training course per year conducted by NPS
169 staff. The training will include the Park information that operators can use to
170 further their own understanding of Park priorities and management objectives as
171 well as enhance the interpretive narrative for air tour clients and increase
172 understanding of parks by air tour clients.

173 3.7B Annual Meeting: At the request of either of the agencies, the Park staff, the
174 local FAA Flight Standards District Office (FSDO), and all operators will meet
175 once per year to discuss the implementation of this ATMP and any amendments
176 or other changes to the ATMP. This annual meeting could be conducted in
177 conjunction with any required annual training.

178 3.7C In-Flight Communication: For situational awareness when conducting tours
179 of the Park, the operators will utilize frequency 122.9 and report when they enter
180 and depart a route. The pilot should identify their company, aircraft, and route to
181 make any other aircraft in the vicinity aware of their position.

182 3.7D Route Allocations: Under this ATMP, up to 26 flights on the Black Route
183 (SGTF) and up to 17 flights on the Blue Route (SMSF) are authorized per year.

184 3.7E Daily Air Tour Allocations: This ATMP includes restrictions on the number
185 of air tours that the operators may conduct each day. These restrictions provide a
186 maximum number of air tours that may be conducted on Standard Days, but allow

187 for a limited number of Flex Days on which the maximum number of air tours
188 allowed are slightly higher.

189 Whirl'd Helicopters, Inc. may conduct up to 4 commercial air tours per day, and
190 Great Smoky Mountain Helicopter Inc. may conduct up to 1 commercial air tour
191 per day on Standard Days. The operators are each authorized up to forty days per
192 year (Flex Days) during which Whirl'd Helicopters, Inc. may conduct up to 5
193 commercial air tours per day, and Great Smoky Mountain Helicopter Inc. may
194 conduct up to 2 commercial air tours per day.

195 3.7F Hovering: Aircraft will not hover or loop while conducting air tours over the
196 park.

197 3.8 Quiet Technology Incentives

198 This ATMP incentivizes the adoption of quiet technology aircraft by commercial air tour
199 operators conducting commercial air tours over the Park. Operators that have converted
200 to quiet technology aircraft will be allowed to conduct tours beginning at sunrise or
201 ending at sunset on all days that flights are authorized. If implementation of this
202 incentive results in a change in existing conditions or a change in the effects of air tour
203 noise on Park resources or visitor enjoyment, additional analysis may be required in order
204 to ensure the continued effectiveness of the incentive.

205 **4.0 JUSTIFICATION FOR MEASURES TAKEN**

206 The provisions and conditions in this ATMP are designed to protect Park resources and
207 visitor experience from the effects of commercial air tours, and support NPS management
208 objectives for the Park.

209 Under the Act, the FAA granted Interim Operating Authority (IOA) for air tours over the
210 Park. IOA does not provide any operating conditions (e.g., routes, altitudes, time of day,
211 etc.) for air tours other than an annual limit.

212 The total number of air tours authorized under this ATMP is consistent with the existing
213 air tours reported over the Park. The annual flight limits in this ATMP are intended to
214 protect visitor experience including NPS interpretive programs, backcountry experience,
215 and cultural resources throughout the Park, as well as Park wildlife by limiting the
216 number of potential disturbances caused by commercial air tours. Annual flight limits on
217 the Black Route (SGTF) and Blue Route (SMSF) are further intended to protect the
218 acoustic environment and backcountry experience of visitors in the Park. These routes
219 fly much further into the Park which can create noise in otherwise quiet and noise
220 sensitive areas, including the backcountry of the Park. Further, these longer routes also
221 have much larger noise footprints and produce much longer durations of noise than other
222 routes.

223 The daily operation limits included in this ATMP in the form of Standard Days and Flex
224 Days are intended to reduce the number of intrusions of non-natural sounds across the
225 Park and to protect backcountry character, visitors' ability to hear natural sounds,

226 interpretive programs and visitor experience, and cultural sites. These limits are
227 consistent with existing daily air tour operations reported over the Park.

228 Routes assigned as part of this ATMP are intended to protect visitor experience and
229 acoustic resources of the Park by aligning flight routes with existing transportation
230 corridors, avoiding noise-sensitive wildlife habitat, and avoiding cultural resources.
231 Aligning routes with transportation corridors including Highway 321, Highway 441,
232 Little River Road, and Wear Cove Gap Road helps mask noise created by air tours.
233 Other specific resource protection measures associated with each route include the
234 following:

- 235 • Red Route (SNPF): The placement of the Red Route (SNPF) avoids Elkmont
236 Historic District, Walker Sisters Place, and Little Greenbrier School, which are
237 noise-sensitive cultural resources of the Park.
- 238 • Light Blue Route (SSMF): The placement of the Light Blue Route (SSMF) avoids
239 Elkmont Historic District and Great Smoky Mountains Institute at Tremont and is
240 intended to protect noise-sensitive cultural resources and education/interpretive
241 programming at the Park.
- 242 • Black Route (SGTF): The placement of the Black Route (SGTF) avoids the
243 Appalachian National Scenic Trail and Cades Cove Historic District, which are
244 noise-sensitive cultural resources of the Park.
- 245 • Blue Route (SMSF): The placement of the Blue Route (SMSF) avoids the
246 Appalachian National Scenic Trail and Cades Cove Historic District, which are
247 noise-sensitive cultural resources of the Park.

248
249 The altitude restrictions in this ATMP are consistent with the National Bald Eagle
250 Management Guidelines (2007),³ raptor protection guidelines,⁴ and other general
251 concerns about wildlife, specifically avian species and migratory avian species.⁵ Nesting
252 eagle and raptor habitat exist across the Park, and nest locations may change over time.
253 Therefore, the minimum altitude extends across the entire Park.

254 Sunrise and sunset are important times of the day for wildlife and visitor use and
255 experience. Biologically important behaviors for many species occur during this time,
256 such as the dawn chorus for songbirds. Wildlife viewing is often conducted during this
257 time of day as well. Day/time restrictions have been included in this ATMP to protect
258 these Park resources. Restrictions for particular events are intended to prevent noise
259 interruptions of Park events or tribal practices.

³ National Bald Eagle Management Guidelines (2007), U.S. Fish and Wildlife Service; The Bald and Golden Eagle Protection Act, 16 U.S.C. § 668 et seq.

⁴ Richardson, C. & Miller C., Recommendations for protecting raptors from human disturbance: A review. *Wildlife Society Bulletin*, 25(3), 634-638 (1997).; See also Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors, Colorado Division of Wildlife (2008). The peregrine falcon is protected under the Migratory Bird Treaty Act. The peregrine falcon is a state-listed species in both North Carolina and Tennessee and as an endangered species in Tennessee.

⁵ The Migratory Bird Treaty Act, 16. U.S.C. § 703 et seq.

260 Operator training and education facilitates effective implementation of the ATMP by
261 making sure that operators remain informed regarding the requirements of this ATMP
262 including any adaptive management measures or amendments, advances operator
263 understanding of Park management objectives and priorities, including noise sensitive
264 areas, and provides opportunities to enhance the interpretive narrative for air tour clients
265 and increases understanding of parks by air tour clients. The annual meeting will be used
266 to review and discuss implementation of this ATMP between Park staff, local FAA
267 FSDO, and all operators and will serve to ensure that air tour operators are aware of the
268 terms and conditions of this ATMP and are made aware of new or reoccurring concerns
269 regarding Park resources.

270 **5.0 COMPLIANCE**

271 On the effective date of this ATMP, all commercial air tours over the Park must comply
272 with the terms of this ATMP in all respects, except that operators may continue to
273 conduct the number of air tour operations authorized under IOA as reflected in their
274 existing Operations Specifications (OpSpecs) until such OpSpecs are modified to require
275 compliance with this ATMP. The NPS and the FAA are both responsible for the
276 monitoring and oversight of the ATMP. If the NPS identifies instances of non-
277 compliance, the NPS will report such findings to the FAA's FSDO having geographic
278 oversight for the Park. The FSDO will investigate all reports of noncompliance. The
279 public may also report allegations of non-compliance with this ATMP to the FSDO
280 which may result in an investigation by the FAA.

281 Investigative determination of non-compliance may result in partial or total loss of
282 authorization to conduct commercial air tours authorized by this ATMP. Any violation
283 of OpSpecs shall be treated in accordance with FAA Order 2150.3, *FAA Compliance and*
284 *Enforcement Program*.

285 5.1 Aircraft Monitoring Technology

286 Operators are required to equip all aircraft used for air tours with flight monitoring
287 technology and to report flight monitoring data as part of their semi-annual reports.
288 Required flight monitoring data shall include the following:

- 289 • Latitude, longitude, and geometric altitude
- 290 • Tail number
- 291 • Date and time stamps for each ping
- 292 • Operator and Doing Business As (DBA), if different
- 293 • Aircraft type
- 294 • Pings set to a maximum of 15 seconds
- 295 • Certificate number

296 Operators already using aircraft equipped with flight monitoring technology shall ensure
297 it meets the performance standards listed above or acquire and install acceptable flight
298 monitoring technology within 180 days of the effective date of this ATMP. For aircraft
299 not already equipped with flight monitoring technology, within 180 days of the effective
300 date of this ATMP, operators shall equip those aircraft with suitable flight monitoring

301 technology. Operators shall use flight monitoring technology during all air tours under
302 this ATMP.

303 **6.0 NEW ENTRANTS**

304 For the purposes of this ATMP, a “new entrant” is a commercial air tour operator that has
305 not been granted any operations under this ATMP or that no longer holds operations
306 under this ATMP at the time of the application. New entrants must apply for and be
307 granted operating authority before conducting commercial air tours over the lands and
308 waters covered by this ATMP.

309 The FAA and the NPS will publish additional information for interested parties about the
310 form and required content of a new entrant application. The FAA and the NPS will
311 jointly consider new entrant applications and determine whether to approve such
312 applications. Review of applications submitted prior to the effective date of this ATMP
313 will commence within six months of the effective date. Applications submitted after that
314 time will be considered no less frequently than every three years from the effective date
315 of this ATMP.

316 If any new entrant is granted operating authority under this ATMP, the FAA will issue
317 OpSpecs (and, if necessary, will revise OpSpecs to operators whose allocation of
318 operating authority change due to accommodation of a new entrant) within 90 days of
319 the publication of an amended ATMP or of the effective date of ATMP changes
320 implemented through the adaptive management process.

321 **7.0 COMPETITIVE BIDDING**

322 When appropriate, the FAA and the NPS will conduct a competitive
323 bidding process pursuant to the criteria set forth in 49 U.S.C. § 40128(a)(2)(B) and other
324 criteria developed by the agencies. Competitive bidding may also be appropriate
325 to address: a new entrant application; a request by an existing operator for
326 additional operating authority; consideration by the agencies of Park-specific resources,
327 impacts, or safety concerns; or for other reasons.

328 The agencies will request information necessary for them to undertake the competitive
329 bidding process from existing operators. Failure to provide such information in a timely
330 manner may result in the disqualification of any such operator.

331 Competitive bidding may necessitate an amendment to this ATMP, additional
332 environmental review, and/or the issuance of new or revised OpSpecs. If updated
333 OpSpecs are required, they will be issued within 90 days of the effective date of this
334 ATMP.

335 **8.0 ADAPTIVE MANAGEMENT**

336 Adaptive management allows for minor modifications to this ATMP without a formal
337 ATMP amendment if the impacts of such changes are within the impacts already

338 analyzed by the agencies under the National Environmental Policy Act, the National
339 Historic Preservation Act, and the Endangered Species Act. Adjustments to the number
340 of commercial air tours allocated to individual operators as a result of the competitive
341 bidding process and minor changes to routes, altitudes, or other operating parameters are
342 examples of adaptive management measures that may not require a formal ATMP
343 Amendment. Such modifications may be made if: 1) the NPS determines that they are
344 necessary to avoid adverse impacts to Park resources, values, or visitor experiences;
345 2) the FAA determines the need for such changes due to safety concerns; or 3) the
346 agencies determine that appropriate, minor changes to this ATMP are necessary to
347 address new information or changed circumstances.

348 **9.0 AMENDMENT**

349 This ATMP may be amended at any time: if the NPS, by notification to the FAA and the
350 operators, determines that the ATMP is not adequately protecting Park resources and/or
351 visitor enjoyment; if the FAA, by notification to the NPS and the operators, determines
352 that the ATMP is adversely affecting aviation safety and/or the national aviation system;
353 or, if the agencies determine that appropriate changes to this ATMP are necessary to
354 address new information or changed circumstances that cannot be addressed through
355 adaptive management.

356 The FAA and the NPS will jointly consider requests to amend this ATMP from interested
357 parties. Requests must be made in writing and submitted to both the FAA and the NPS.
358 Requests must also include justification that includes information regarding how the
359 requested amendment: is consistent with the objectives of this ATMP with respect to
360 protecting Park resources, tribal lands, or visitor use and enjoyment; and would not
361 adversely affect aviation safety or the national aviation system. The FAA will publish
362 additional information for interested parties about the form and manner for submitting a
363 request.

364 Increases to the total number of annual air tours authorized under this ATMP resulting
365 from accommodation of a new entrant application or a request by an existing
366 operator will require an amendment to this ATMP.

367 Notice of all Amendments to this ATMP will be published in the Federal Register for
368 notice and comment.

369 **10.0 CONFORMANCE OF OPERATIONS SPECIFICATIONS**

370 New OpSpecs that incorporate the operating parameters set forth in this ATMP will be
371 issued within 90 days of the effective date of this ATMP.

372 **11.0 EFFECTIVE DATE**

373 This ATMP is effective [date].

374

375

<INSERT name>, Superintendent
Great Smoky Mountains National
Park
National Park Service

<INSERT name>, <INSERT title>
<INSERT name of FAA office>
Federal Aviation Administration

<INSERT name>, Regional
Director
Unified Interior Region 2: South
Atlantic-Gulf
National Park Service

<INSERT name>, Associate
Director
Natural Resource Stewardship and
Science Directorate
National Park Service

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377

378

APPENDIX A

379

1.0 COMMERCIAL AIR TOUR ALLOCATIONS

380

Table 1 provides allocations of the annual operations along with authorized aircraft type by operator.

382

Table 1. Air Tour Operations and Aircraft Type by Operator

Air Tour Operator	Annual Operations	Daily Operations	Aircraft Type
Whirl'd Helicopters, Inc.	864 tours Annual limit of 26 flights on the Black Route (SGTF) and 17 flights on the Blue Route (SMSF)	4 tours on Standard Days, with 40 Flex Days per year days on which up to 5 tours is allowed	BHT-206-B, BHT-206-L1, BHT-206-L3, R-44-44, R-44-II, R-44-RavenII
Great Smoky Mountain Helicopter Inc. (Smoky Mountain Helicopters, M Helicopters of TN, Delta Helicopters, Cherokee Helicopters)	82 tours	1 tour on Standard Days, with 40 Flex Days per year on which up to 2 tours is allowed	BHT-206-B

383

384

2.0 DAY/TIME RESTRICTIONS

385

Table 2 lists the time-of-day and day-of-week operating parameters.

386

Table 2. Air Tour Time-of-Day and Day-of-Week Restrictions by Operator

Air Tour Operator	Time-of-Day	Day-of-Week
Whirl'd Helicopters, Inc.	Two hours after sunrise until two hours before sunset	The NPS can establish temporary no-fly periods that apply to air tours for special events or planned Park management.
Great Smoky Mountain Helicopter Inc. (Smoky Mountain Helicopters, M Helicopters of TN, Delta Helicopters, Cherokee Helicopters)	Two hours after sunrise until two hours before sunset	The NPS can establish temporary no-fly periods that apply to air tours for special events or planned Park management.

387

388

389 Table 3 lists the standard day and flex day restrictions by operator.

390 **Table 3.** Air Tour Standard Day and Flex Day Restrictions by Operator

Air Tour Operator	Standard Day Flight Limit	Number of Standard Days	Flex Day Limit	Number of Flex Days
Whirl'd Helicopters, Inc.	4	Unrestricted	5	40
Great Smoky Mountain Helicopter Inc. (Smoky Mountain Helicopters, M Helicopters of TN, Delta Helicopters, Cherokee Helicopters)	1	Unrestricted	2	40

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DRAFT

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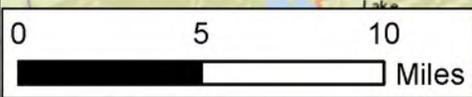
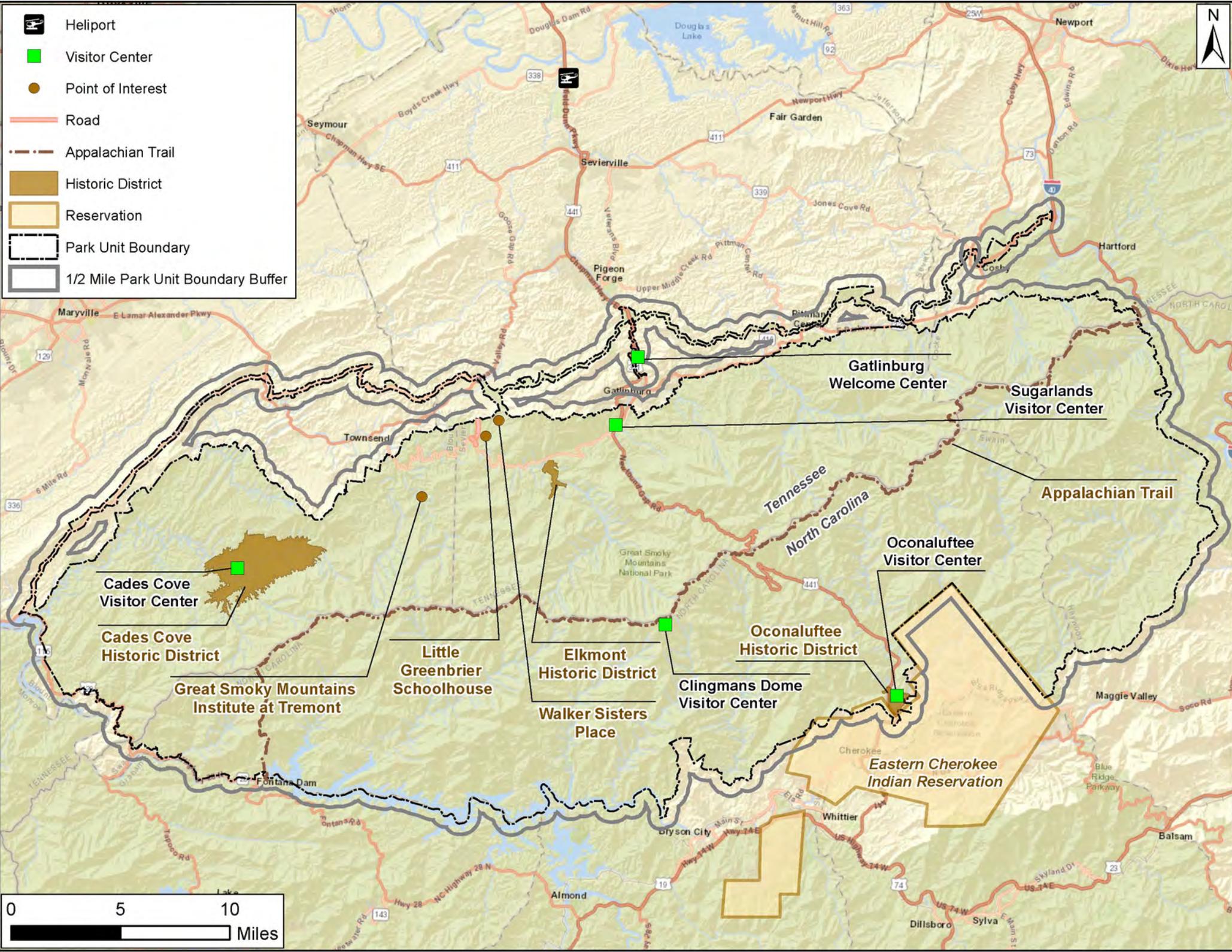
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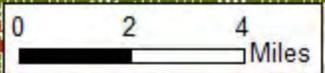
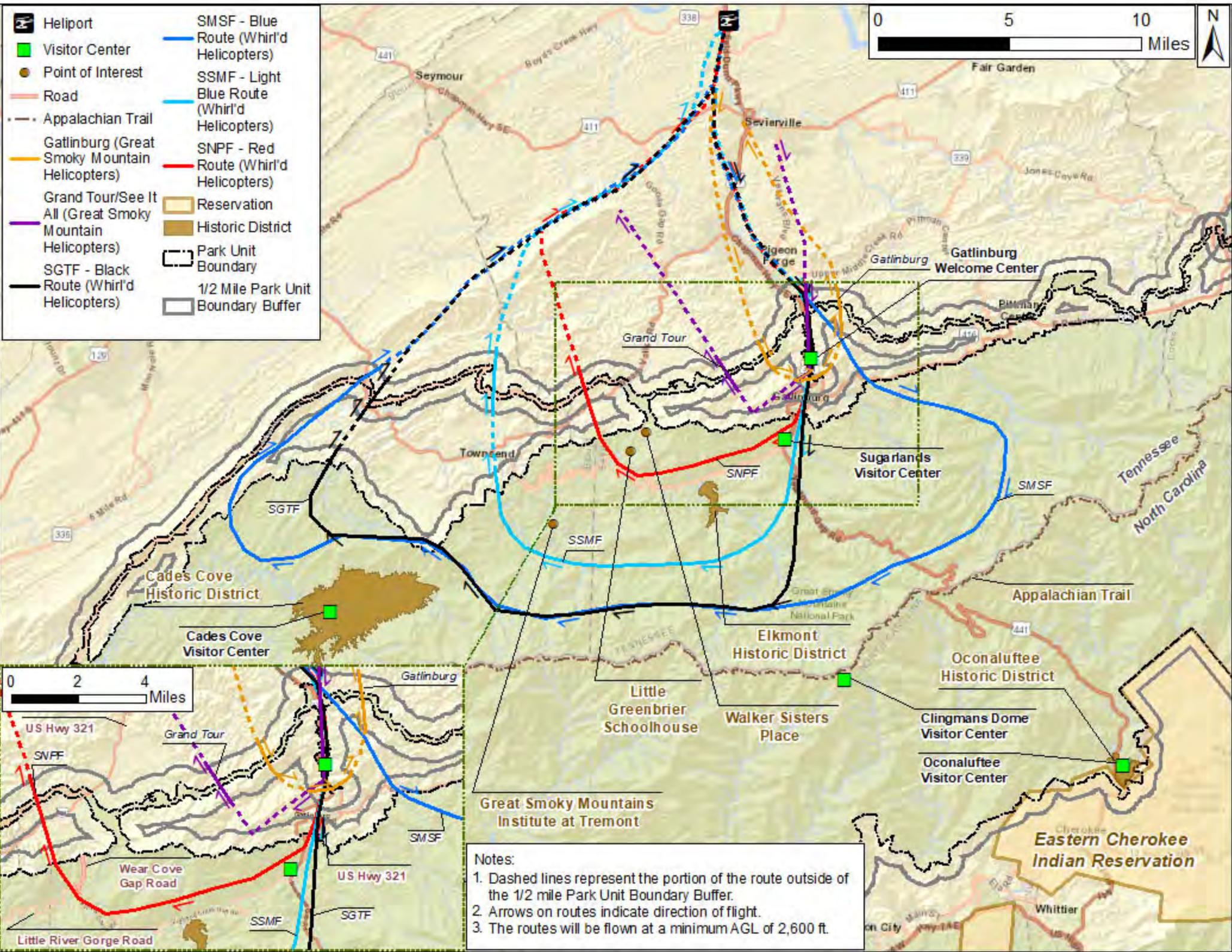
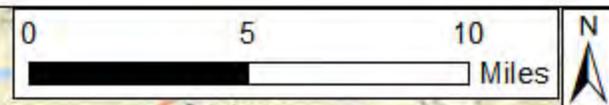
APPENDIX B

395 Enlarged Figure 1 and 2

-  Heliport
-  Visitor Center
-  Point of Interest
-  Road
-  Appalachian Trail
-  Historic District
-  Reservation
-  Park Unit Boundary
-  1/2 Mile Park Unit Boundary Buffer



	Heliport		SMSF - Blue Route (Whirl'd Helicopters)
	Visitor Center		SSMF - Light Blue Route (Whirl'd Helicopters)
	Point of Interest		SNPF - Red Route (Whirl'd Helicopters)
	Road		Reservation
	Appalachian Trail		Historic District
	Gatlinburg (Great Smoky Mountain Helicopters)		Park Unit Boundary
	Grand Tour/See It All (Great Smoky Mountain Helicopters)		1/2 Mile Park Unit Boundary Buffer
	SGTF - Black Route (Whirl'd Helicopters)		



Great Smoky Mountains Institute at Tremont

- Notes:
1. Dashed lines represent the portion of the route outside of the 1/2 mile Park Unit Boundary Buffer.
 2. Arrows on routes indicate direction of flight.
 3. The routes will be flown at a minimum AGL of 2,600 ft.

Attachment 2

NOISE TECHNICAL ANALYSIS

Indicators of acoustic conditions

There are numerous ways to measure the potential impacts of noise from commercial air tours on the acoustic environment of a park, including intensity, duration, and spatial footprint of the noise. The metrics and acoustical terminology used for the ATMP are shown in Table 4.

Table 1. Primary metrics used for the noise analysis.

Metric	Relevance and citation
Time Above 35 dBA ¹	<p>The amount of time (in minutes) that aircraft sound levels are above a given threshold (i.e., 35 dBA)</p> <p>In quiet settings, outdoor sound levels exceeding 35 dB degrade experience in outdoor performance venues (ANSI 12.9-2007, Quantities And Procedures For Description And Measurement Of Environmental Sound – Part 5: Sound Level Descriptors For Determination Of Compatible Land Use); Blood pressure increases in sleeping humans (Haralabidis et al., 2008); maximum background noise level inside classrooms (ANSI/ASA S12.60/Part 1-2010, Acoustical Performance Criteria, Design Requirements, And Guidelines For Schools, Part 1: Permanent Schools).</p>
Time Above 52 dBA ¹	<p>The amount of time (in minutes) that aircraft sound levels are above a given threshold (i.e., 52 dBA)</p> <p>This metric represents the level at which one may reasonably expect interference with Park interpretive programs. At this background sound level (52 dB), normal voice communication at five meters (two people five meters apart), or a raised voice to an audience at ten meters would result in 95% sentence intelligibility.²</p>
Equivalent sound level, L _{Aeq, 12 hr}	<p>The logarithmic average of commercial air tour sound levels, in dBA, over a 12-hour day. The selected 12-hour period is 7 am – 7 pm to represent typical daytime commercial air tour operating hours.</p>

¹ dBA (A-weighted decibels): Sound is measured on a logarithmic scale relative to the reference sound pressure for atmospheric sources, 20 µPa. The logarithmic scale is a useful way to express the wide range of sound pressures perceived by the human ear. Sound levels are reported in units of decibels (dB) (ANSI S1.1-1994, American National Standard Acoustical Terminology). A-weighting is applied to sound levels in order to account for the sensitivity of the human ear (ANSI S1.42-2001, Design Response of Weighting Networks for Acoustical Measurements). To approximate human hearing sensitivity, A-weighting discounts sounds below 1 kHz and above 6 kHz.

² Environmental Protection Agency. Information on Levels of Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety, March 1974.

<p>Day-night average sound level, L_{dn} (or DNL)</p>	<p>The 24-hour average sound level, in dBA, after addition of ten decibels to sounds occurring from 10 p.m. to 7 a.m.</p> <p>For aviation noise analyses, the FAA has determined that the cumulative noise energy exposure of individuals to noise resulting from aviation activities must be established in terms of Day-night average sound level (DNL)³.</p> <p>Note: Both $L_{Aeq, 12hr}$ and L_{dn} characterize: Increases in both the loudness and duration of noise events The number of noise events during specific time period (12 hours for $L_{Aeq, 12hr}$ and 24-hours for L_{dn}) L_{dn} takes into account the increased sensitivity to noise at night by including a ten dB penalty between 10 p.m. and 7 a.m. local time. <i>If there are no nighttime events, then $L_{Aeq, 12hr}$ is arithmetically three dBA higher than L_{dn}.</i></p> <p>The FAA’s indicators of significant impacts are for an action that would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe⁴.</p>
<p>Maximum sound level, L_{max}</p>	<p>The loudest sound level, in dBA, generated by the loudest event; it is event-based and is independent of the number of operations. L_{max} does not provide any context of frequency, duration, or timing of exposure.</p>

ATMP as related to indicators

In order to provide a conservative evaluation of potential noise effects produced by commercial air tours under the ATMP, the analysis is based on a characterization of a busy day of commercial air tour activity. For the busiest year of commercial air tour activity from 2017-2019 based on the total number of commercial air tour operations and total flight miles over the Park, the 90th percentile day was identified for representation of the busy day in terms of number of operations, and then further assessed for the type of aircraft and route flown to determine if it is a reasonable representation of the commercial air tour activity at the Park. For the Park, the 90th percentile day was identified as the following:

- Red Route (SNPF) – three flights, BHT-206-L1 aircraft
- Light Blue Route (SSMF) – one flight, BHT-206-L1 aircraft
- Blue Route (SMSF) – one flight, BHT-206-L1 aircraft
- Orange Route (Gatlinburg) – one flight, Bell 206-L aircraft
- Purple Route (Grand Tour/See It All) – one flight, Bell 206-L aircraft

Noise contours for the following acoustic indicators were developed using the Federal Aviation Administration's Aviation Environmental Design Tool (AEDT) version 3d and are provided below. A noise contour presents a graphical illustration or “footprint” of the area potentially affected by the noise.

³ FAA Order 1050.1F, Appx. B, sec B-1
⁴ FAA Order 1050.1F, Exhibit 4-1

- Time above 35 dBA (minutes) – see Figure 2
- Time above 52 dBA (minutes) – see Figure 3
- Equivalent Sound Level or $L_{Aeq, 12hr}$
- Equivalent sound level, $L_{Aeq, 12hr}$ – see Figure 4
 - Note: Contours are not presented for L_{dn} (or DNL) as it is arithmetically three dBA lower than $L_{Aeq, 12hr}$ if there are no nighttime events, which is the case for the ATMP modeled at the Park.
- Maximum sound level or L_{max} – see Figure 5

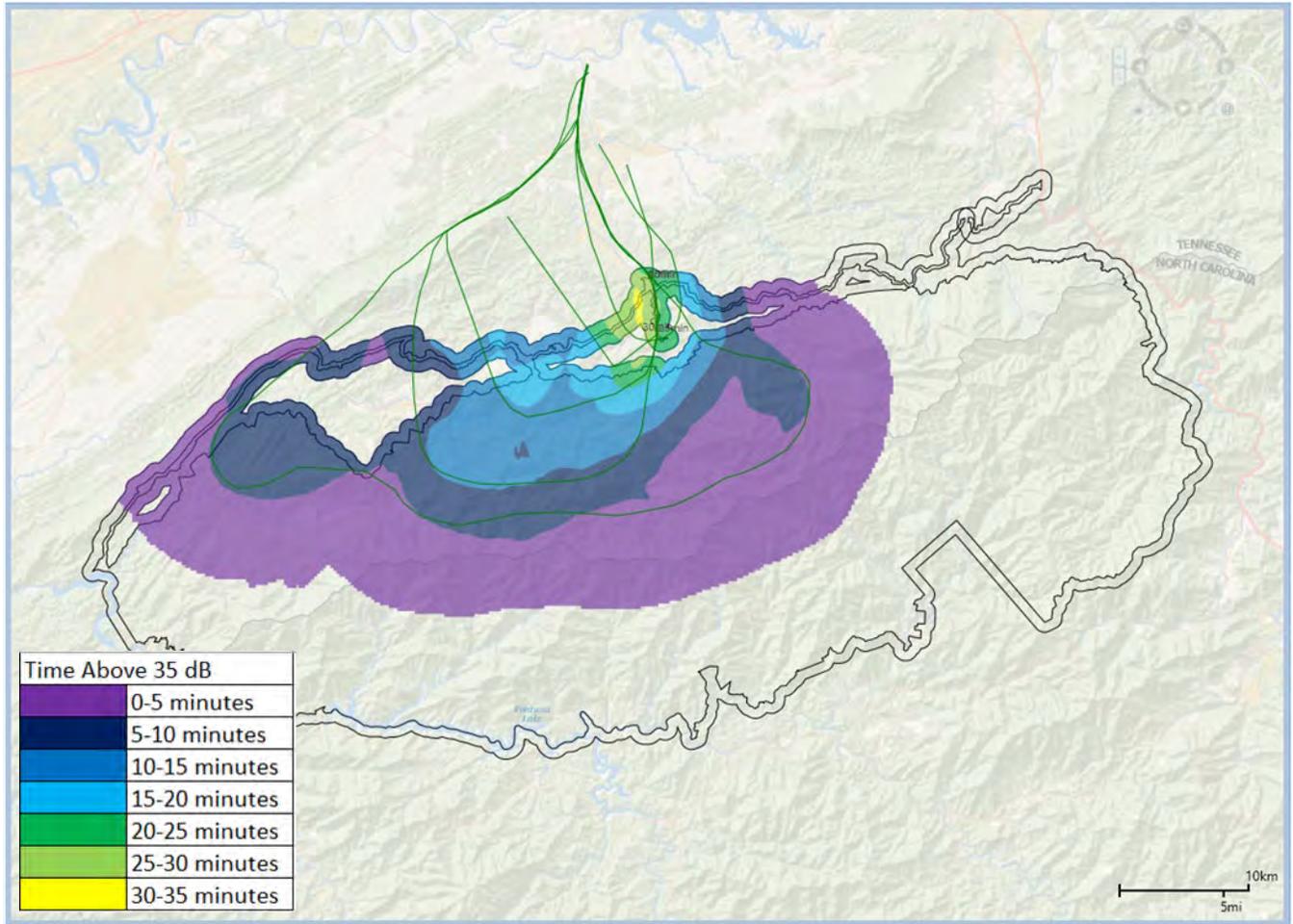


Figure 2. Noise contour results for Time Above 35 dBA

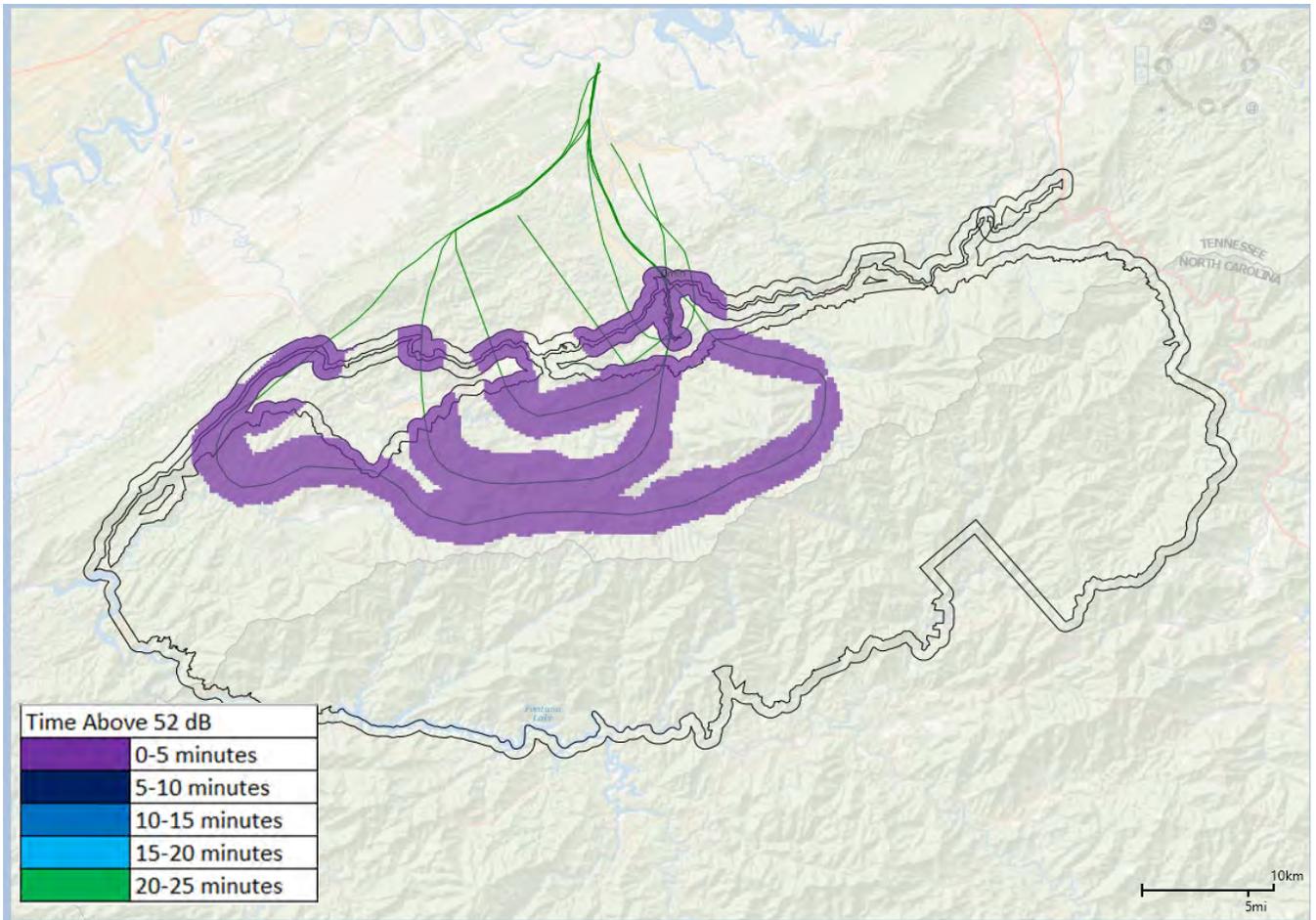


Figure 3. Noise contour results for Time Above 52 dBA

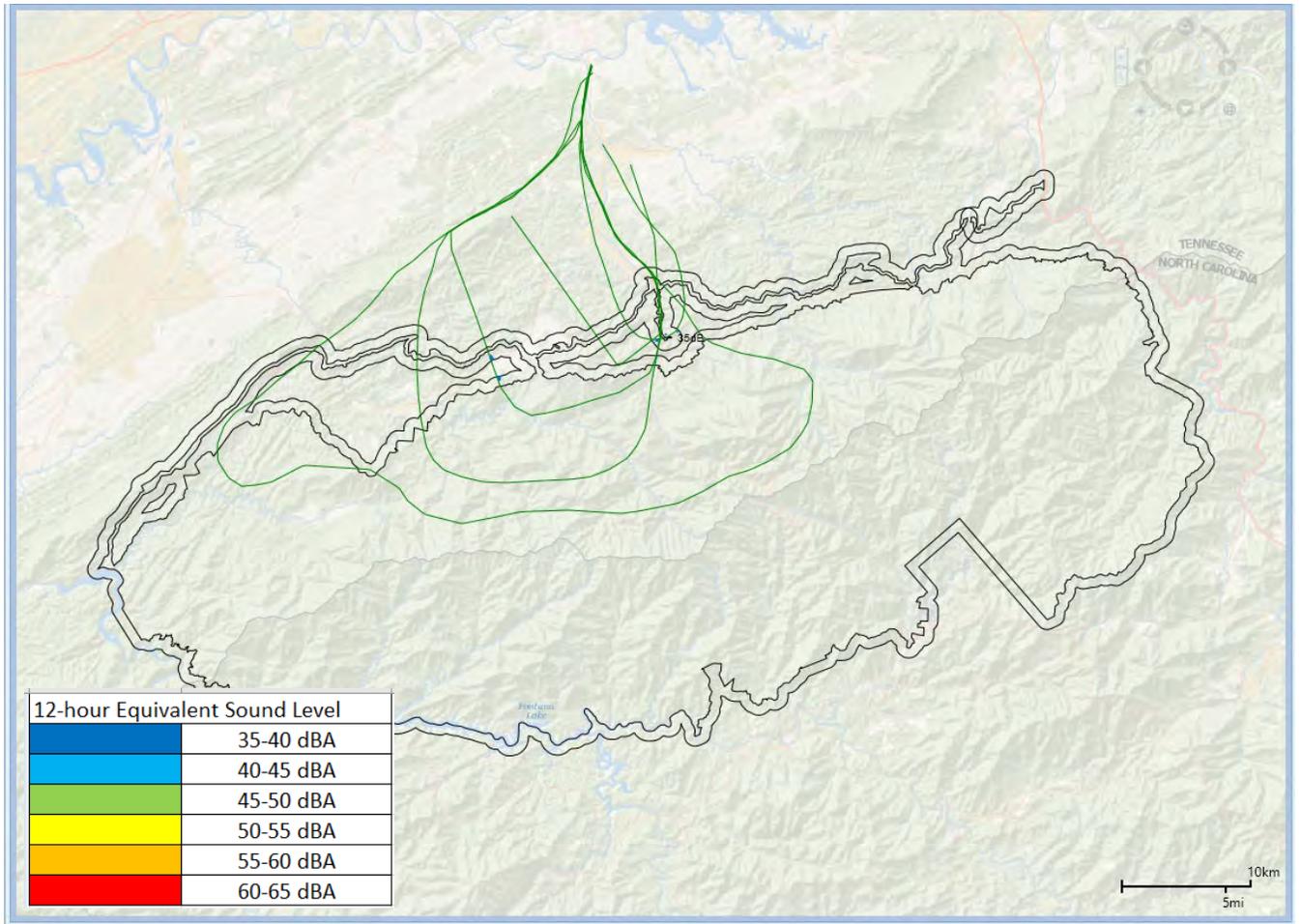


Figure 4. Noise contour results for $L_{Aeq, 12hr}$

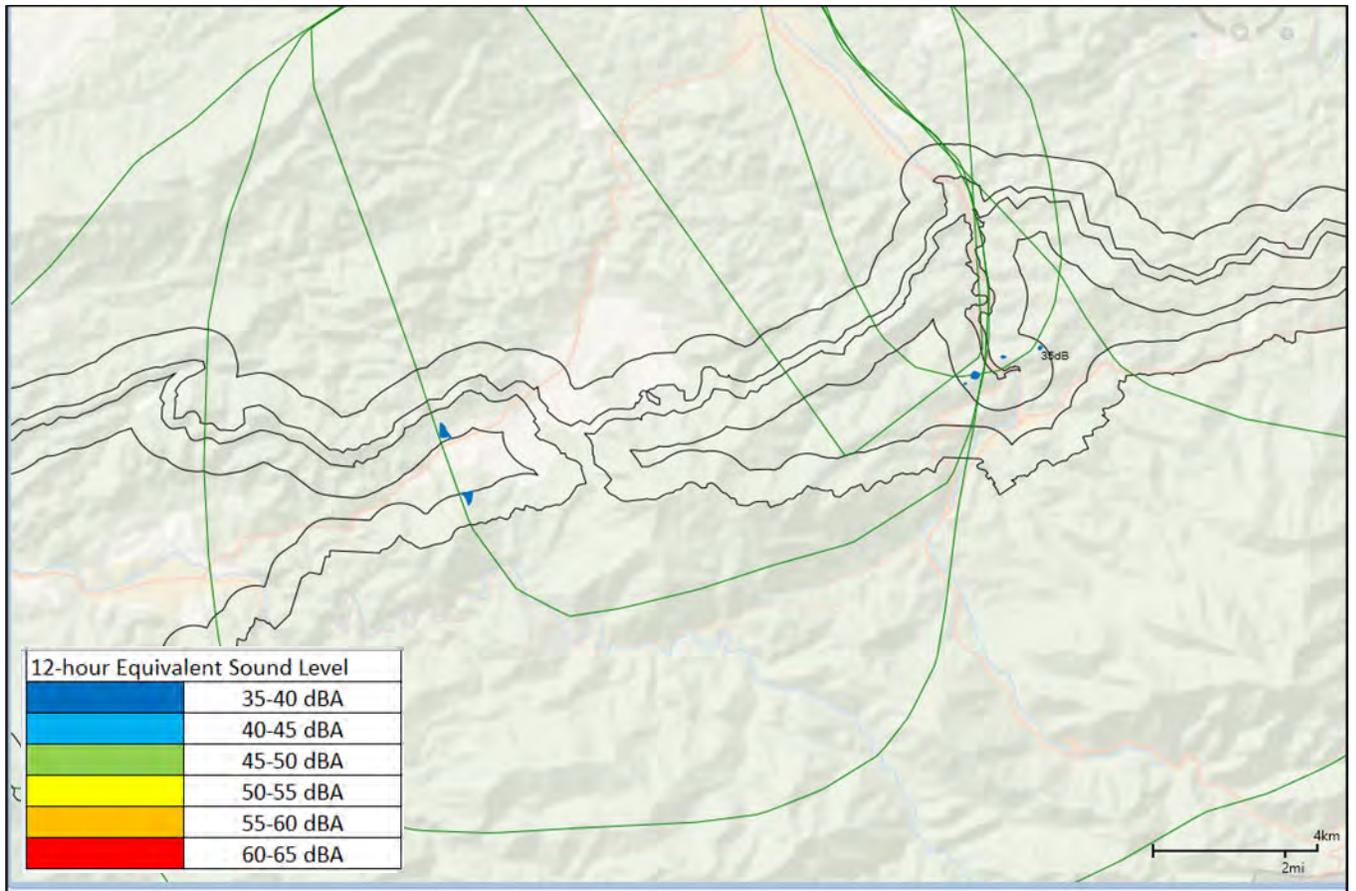


Figure 5. Zoomed-in noise contour results for L_{Aeq}

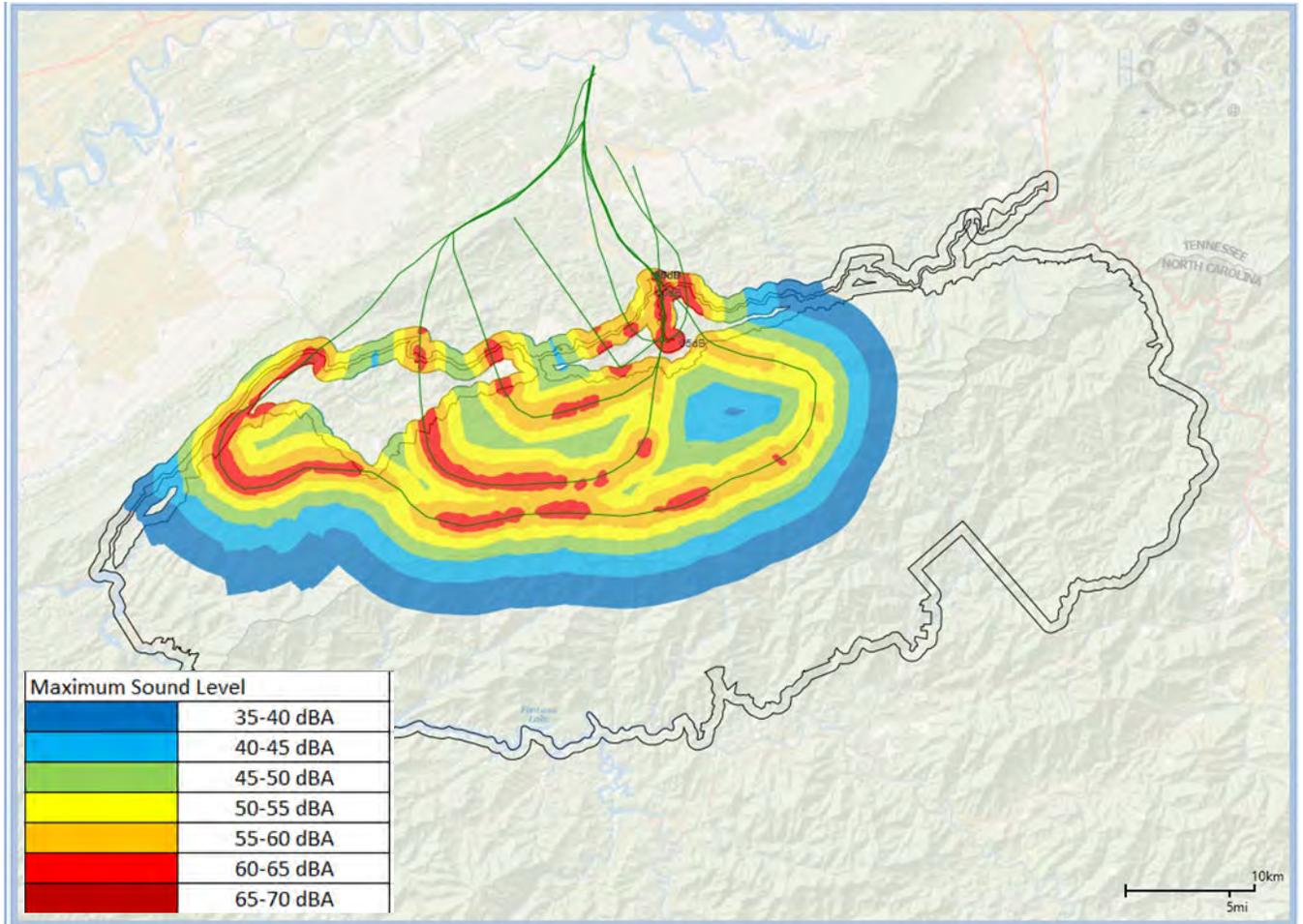


Figure 6. Noise contour results for L_{max}

APPENDIX F

National Historic Preservation Act: Section 106 Compliance Documentation



United States Department of Transportation
FEDERAL AVIATION ADMINISTRATION
Office of Policy, International Affairs & Environment
Office of Environment and Energy

NATIONAL PARKS AIR TOUR MANAGEMENT PROGRAM

May 3, 2022

Re: Continuing Section 106 Consultation and Finding of No Adverse Effect under Section 106 of the National Historic Preservation Act for the development of an Air Tour Management Plan for Great Smoky Mountains National Park

Renee Gledhill-Earley
Environmental Review Coordinator
North Carolina State Historic Preservation Office
4617 Mail Service Center
Raleigh NC, 27699

Dear Renee Gledhill-Earley:

Introduction

The Federal Aviation Administration (FAA), in coordination with the National Park Service (NPS), seeks to continue Section 106 consultation with your office under Section 106 of the National Historic Preservation Act (NHPA) for the development of an Air Tour Management Plan (ATMP) for Great Smoky Mountains National Park (Park). At this time, the FAA requests your concurrence with its proposed finding of “no adverse effect” on historic properties, in accordance with 36 CFR 800.5(c). On this date, we are also notifying all consulting parties of this proposed finding and providing the documentation below for their review.

In accordance with the requirements of 36 CFR 800.11(e), this letter describes the undertaking, including: changes that have occurred since the draft ATMP was issued to the public; the Area of Potential Effect (APE); a description of steps taken to identify historic properties; a description of affected historic properties in the APE and the characteristics that qualify them for the National Register of Historic Places (NRHP); and an explanation of why the criteria of adverse effect do not apply to this undertaking. This letter also describes the Section 106 consultation process and public involvement completed for this undertaking.

The FAA initiated Section 106 consultation with your office by letter dated March 29, 2021. In a follow-up letter dated August 30, 2021, we described the proposed undertaking in more detail, proposed a preliminary APE, and provided our initial list of historic properties identified within the APE. FAA conducted additional identification efforts and provided a revised list of historic properties in our most recent correspondence dated February 4, 2022. Similar letters were sent to all consulting parties.

Public involvement for this undertaking was integrated with the National Parks Air Tour Management Act (NPATMA) process. We issued the draft ATMP on September 3, 2021, and notice of the availability of the draft was published in the Federal Register. The public comment period for the draft ATMP extended from September 3, 2021, through October 13, 2021. A public meeting was held on September 16, 2021. The results of our Section 106 consultation with tribes are described below.

The FAA and NPS received three public comments requesting the agencies ensure protection of cultural resources within the APE for the ATMP. These comments were general in nature and broadly encouraged the agencies to comply with Section 106 of the NHPA. The FAA and NPS also received public comments expressing concern about the potential noise and visual effects resulting from commercial air tours. None of these comments specifically related to historic properties or the undertaking's potential effect on them.

Description of the Undertaking

The FAA and the NPS are developing ATMPs for 24 parks, including Great Smoky Mountains National Park. The ATMPs are being developed in accordance with NPATMA. Each ATMP is unique and therefore, each ATMP is being assessed individually under Section 106.

Commercial air tours have been operating over the Park for over 20 years. Since 2005, these air tours have been conducted pursuant to interim operating authority (IOA) issued by FAA in accordance with NPATMA. IOA does not provide any operating conditions (e.g., routes, altitudes, time of day, etc.) for air tours other than a limit of 1,920 air tours per year over the Park and Eastern Cherokee tribal lands within ½ mile of the Park's boundary. The ATMP will replace IOA for both the Park and tribal lands. The ATMP will not regulate the airspace over tribal lands belonging to the Eastern Band of the Cherokee Indians more than ½ mile outside the Park boundary.

The FAA and the NPS have documented the existing conditions for commercial air tour operations at the Park. The FAA and the NPS consider the existing operations for commercial air tours to be an average of 2017-2019 annual air tours flown, which is 946 air tours. The agencies decided to use a three-year average because it reflects the most accurate and reliable air tour conditions based on available operator reporting, and accounts for variations across multiple years, excluding more recent years affected by the COVID 19 pandemic. Commercial air tours currently are conducted in BHT-206-L1, BHT-206-L3, BHT-206-B, R-44-44, R-44-II, and R-44-RavenII helicopters. Commercial air tour operations presently fly between 1,000 and 1,500 ft. above ground level (AGL).¹ Under existing conditions, commercial air tours are conducted along the routes shown in **Attachment A**.

The undertaking for purposes of Section 106 is implementing the ATMP that applies to all commercial air tours over the Park and within ½ mile outside the boundary of the Park, including tribal lands belonging to the Eastern Band of the Cherokee Indians within ½ mile of the Park's boundary. A commercial air tour subject to the ATMP is any flight conducted for compensation or hire in a powered aircraft where a purpose of the flight is sightseeing over the Park, or within ½ mile of the Park boundary, during which the aircraft flies:

¹ Altitude expressed in units above ground level (AGL) is a measurement of the distance between the ground surface and the aircraft, whereas altitude expressed in median sea level (MSL) refers to the altitude of aircraft above sea level, regardless of the terrain below it. Aircraft flying at a constant MSL altitude would simultaneously fly at varying AGL altitudes, and vice versa, assuming uneven terrain is present below the aircraft.

- (1) Below 5,000 feet above ground level (except solely for the purposes of takeoff or landing, or necessary for safe operation of an aircraft as determined under the rules and regulations of the FAA requiring the pilot-in-command to take action to ensure the safe operation of the aircraft); or
- (2) Less than one mile laterally from any geographic feature within the Park (unless more than ½ mile outside the Park boundary).

The undertaking would result in commercial air tours being conducted along the routes shown in **Attachment B**. The new routes are based on the existing conditions but modified so that the routes avoid flying directly over the following historic properties: Appalachian National Scenic Trail, Cades Cove Historic District, Clingman's Dome, Great Smoky Mountains Institute at Tremont, Elkmont Historic District, Walker Sisters Place, Voorheis Estate, and Little Greenbrier School.

The undertaking was previously described in detail in our Section 106 consultation letter to you dated August 30, 2021. The following elements of the ATMP have remained unchanged since the issuance of the draft ATMP to the public.

- A maximum of 946 commercial air tours are authorized per year on the routes depicted in **Attachment B**, none of which fly over, or can be seen or heard from, tribal lands belonging to the Eastern Band of the Cherokee Indians;
- Air tours will fly no lower than 2,600 ft. AGL.
- The aircraft type authorized for commercial air tours are BHT-206-L1, BHT-206-L3, BHT-206-B, R-44-44, R-44-II, and R-44-RavenII helicopters. Any new or replacement aircraft must not exceed the noise level produced by the aircraft being replaced;
- Commercial air tours authorized under this ATMP shall be conducted on designated air tour routes specific to each operator and as described below:

Whirl'd Helicopters, Inc.:

- Red Route (SNPF): Air tours along the Red Route (SNPF) will follow the road corridors of Highway 321, Highway 441, Little River Road, and Wear Cove Gap Road. As this route turns north to exit the Park, the route will fly west of Wear Cove Gap Road.
- Light Blue Route (SSMF): Air tours along the Light Blue Route (SSMF) will enter the Park following along the road corridors of Highway 321 and Highway 441. Air tours on the Light Blue Route (SSMF) will stay at least one mile south of the Elkmont Historic District and Tremont.
- Black Route (SGTF): Air tours along the Black Route (SGTF) will enter the Park following along the road corridors of Highway 321 and Highway 441. Air tours will stay at least one-half mile north of the Appalachian National Scenic Trail and one mile north of Cades Cove Historic District.
- Blue Route (SMSF): Air tours along the Blue Route (SMSF) will stay at least one-half mile north of the Appalachian National Scenic Trail and one mile north of Cades Cove Historic District.

Great Smoky Mountain Helicopter Inc.:

- Orange Route (Gatlinburg): Air tours along the Orange Route (Gatlinburg) will cross over the Foothills Parkway west of Gatlinburg, head east over the Hwy 321 spur of the Foothills Parkway, and then exit back over the Foothills Parkway east of Gatlinburg. This route will

only overfly the Foothills Parkway and will stay at least ½ mile outside of the remainder of the Park.

- Purple Route (Grand Tour/See It All): Air tours along the Purple Route (Grand Tour/See It All) will fly over the Foothills Parkways along the Hwy 321 spur heading south. The tour routes will then head west and exit the Park west of Gatlinburg. This route will only overfly the Foothills Parkway and will stay at least ½ mile outside of the remainder of the Park.
- Routes assigned as part of this ATMP are intended to protect visitor experience, natural and cultural resources, and acoustic resources of the Park by aligning flight routes with existing transportation corridors, avoiding noise-sensitive wildlife habitat, as well as NRHP- eligible or listed historic properties. Aligning routes with transportation corridors including Highway 321, Highway 441, Little River Road, and Wear Cove Gap Road is intended to mask noise created by air tours. Other specific resource protection measures associated with each route include the following:
 - Red Route (SNPF): The existing route flown by the operator was modified to avoid overflights of Elkmont Historic District, Voorheis Estate, Walker Sisters Place, and Little Greenbrier School historic properties located within the APE.
 - Light Blue Route (SSMF): The existing route flown by the operator was modified to avoid overflights of Elkmont Historic District, Voorheis Estate, and Great Smoky Mountains Institute at Tremont and is intended to protect historic properties within the APE and education/interpretive programming at the Park.
 - Black Route (SGTF): The existing route flown by the operator was modified to avoid overflights of the Appalachian National Scenic Trail, Voorheis Estate, and Cades Cove Historic District, which are historic properties located within the APE.
 - Blue Route (SMSF): The existing route flown by the operator was modified to avoid overflights of the Appalachian National Scenic Trail, Cades Cove Historic District, and Clingman's Dome and is intended to avoid historic properties within the APE.

The ATMP includes restrictions on the number of commercial air tours that the operators may conduct each day. These restrictions provide a maximum number of commercial air tours that will be conducted on Standard Days (total of 5 air tours across all operators), but allow for a limited number of Flex Days on which the maximum number of commercial air tours allowed are slightly higher (total of 7 across all operators).

- Whirl'd Helicopters, Inc. will be able to conduct up to four commercial air tours per day, and Great Smoky Mountain Helicopter, Inc. will be able to conduct up to one commercial air tour per day on Standard Days. The operators will each be authorized to fly up to forty days per year (Flex Days) during which Whirl'd Helicopters, Inc. will be able to conduct up to five commercial air tours per day, and Great Smoky Mountain Helicopter, Inc. will be able to conduct up to two commercial air tours per day.
- Aircraft will not be able to hover or loop while conducting commercial air tours over the Park.
- Commercial air tours may operate two hours after sunrise until two hours before sunset, as defined by the National Oceanic and Atmospheric Administration (NOAA), unless they qualify for the quiet technology incentive.²

² Sunrise and sunset data is available from the NOAA Solar Calculator, <https://www.esrl.noaa.gov/gmd/grad/solcalc/>

- Air tours may operate any day of the year except that the NPS can establish temporary no-fly periods for special events (including tribal ceremonies or other similar events) or planned Park management, with a minimum of one month notice to the operators in writing, absent exigent circumstances or emergency operations;
- The operator is required to install and use flight monitoring technology on all authorized commercial air tours, and to include flight monitoring data in their semi-annual reports to the agencies, along with the number of commercial air tours conducted.
- When made available by Park staff, the operators/pilots will take at least one training course per year conducted by the NPS. The training will include Park information that the operator can use to further their own understanding of Park priorities and management objectives as well as enhance the interpretive narrative for air tour clients and increase understanding of parks by air tour clients;
- At the request of either of the agencies, the Park staff, the local FAA Flight Standards District Office (FSDO), and the operators will meet once per year to discuss the implementation of this ATMP and any amendments or other changes to the ATMP. This annual meeting could be conducted in conjunction with any required annual training;
- For situational awareness when conducting tours of the Park, the operators will utilize frequency 122.9 and report when they enter and depart a route. The pilot should identify their company, aircraft, and route to make any other aircraft in the vicinity aware of their position;
- The FAA and the NPS are both responsible for monitoring and oversight of the ATMP. If the NPS identifies instances of non-compliance, the NPS will report such findings to the FAA's FSDO having geographic oversight for the Park.

A new subsection was added in response to questions and comments regarding the transferability of air tour allocations, or the assumption of allocations of commercial air tours by a successor corporation. The added language makes clear that annual allocations of air tours are not transferrable between operators, though they may be assumed by a successor purchaser. Conditions are included to ensure that the agencies have sufficient time to review the transaction to avoid an interruption of service and the successor operator must acknowledge and agree to the comply with the ATMP. This language is excerpted below:

- Annual operations under the ATMP are non-transferable. An allocation of annual operations may be assumed by a successor purchaser that acquires an entity holding allocations under this ATMP in its entirety. In such case the prospective purchaser shall notify the FAA and the NPS of its intention to purchase the operator at the earliest possible opportunity to avoid any potential interruption in the authority to conduct commercial air tours under the ATMP. This notification must include a certification that the prospective purchase has read and will comply with the terms and conditions in the ATMP. The FAA will consult with the NPS before issuing new or modified operations specifications or taking other formal steps to memorialize the change in ownership.

The agencies revised some of the language related to the quiet technology incentive, but not the incentive itself, in order to clarify that applications for the incentive will be analyzed on a case-by-case basis. The revised language is below:

- The ATMP incentivizes the use of quiet technology aircraft by commercial air tour operators. Operators that have converted to quiet technology aircraft, or are considering converting to quiet technology aircraft may request to be allowed to conduct air tours beginning at sunrise or ending at sunset on all days that flights are authorized. Because aviation technology continues

to evolve and advance and FAA updates its noise certification standards periodically, the aircraft eligible for this incentive will be analyzed on a case-by-case basis at the time of the operator's request to be considered for this incentive. The NPS will periodically monitor Park conditions and coordinate with FAA to assess the effectiveness of this incentive. If implementation of this incentive results in unanticipated effects on Park resources or visitor experience, further agency action may be required to ensure the protection of Park resources and visitor experience.

The draft ATMP and the included maps were edited to clearly identify the tribal lands belonging to the Eastern Band of the Cherokee Indians within ½ mile of the Park boundary. The ATMP was revised to explain that none of the routes designated in the ATMP fly over tribal lands of the Eastern Band of Cherokee Indians. Further edits were made to make clearer that the restrictions imposed by the ATMP apply not only when the operator is flying over lands or waters within the Park boundary but also when the operator is flying over lands or waters outside of the Park but within ½ mile of its boundary.

The agencies also clarified that a plan amendment, and additional environmental review, would be required in order to increase the number of authorized commercial air tours per year above the 946 authorized in the ATMP. The revised language is below:

- Increases to the total number of air tours authorized under the ATMP resulting from accommodation of a new entrant application or a request by an existing operator will require an amendment to the ATMP and additional environmental review.

Area of Potential Effects

The APE for the undertaking was proposed in the Section 106 consultation letter dated August 30, 2021. The undertaking does not require land acquisition, construction, or ground disturbance. In establishing the APE, the FAA sought to include areas where any historic property present could be affected by noise from or sight of commercial air tours over the Park or adjacent tribal lands. The FAA considered the number and altitude of commercial air tours over historic properties in these areas to further assess the potential for visual effects and any incremental change in noise levels that may result in alteration of the characteristics of historic properties qualifying them as eligible for listing in the NRHP.

The APE for the undertaking comprises the Park and a ½ mile outside the boundary of the Park, as depicted in **Attachment B** below. This map also displays the air tour routes authorized under the ATMP. The FAA requested comments from all consulting parties including federally recognized tribes. The FAA has not received any comments regarding the APE from any identified consulting party identified thus far. The changes to the undertaking described above do not have the potential to cause alterations in the character or use of historic properties. The FAA determined the delineated APE adequately captures potential effects from the undertaking on historic properties and is unchanged.

Identification of Historic Properties

Preliminary identification of historic properties relied upon data submitted by NPS park staff about known historic properties within the Park. The Section 106 consultation efforts involved outreach to tribes, the Tennessee Historical Commission, North Carolina State Historic Preservation Office, operators, and other consulting parties including local governments and neighboring federal land managers. Public comments submitted as part of the draft ATMP public review process also informed identification efforts.

The FAA, in cooperation with the NPS, coordinated with Park staff to identify known historic properties located within the APE. The FAA also accessed the Tennessee Historical Commission Viewer, the list of

National Register properties in Tennessee available on the TNSHPO website, including the Multiple Property Documentation Form for Historic Resources of Great Smoky Mountains National Park, and the North Carolina Department of Natural and Cultural Resources' GIS database on November 08, 2021, to collect GIS data for previously-identified properties both inside and outside the Park and consulted with the tribes listed in **Attachment C** regarding the identification of any other previously unidentified historic properties that may also be located within the APE.

On January 28, 2022, Section 106 consulting party "A Walk in the Woods" responded to the FAA's letter dated January 27, 2022. "A Walk in the Woods" requested the Cataloochee, Cosby, and Greenbrier areas of Great Smoky Mountains National Park be identified as historic properties within the APE for the undertaking. The FAA coordinated with the NPS on this request and determined that only the Greenbrier Area falls within the APE. Pursuant to 36 CFR 800.4(c)(2), the FAA considers the Greenbrier Area as eligible for the NRHP under Criterion A for its association with the development of early mountain settlements in eastern Tennessee, and requests concurrence from the Tennessee Historical Commission on the eligibility of the Greenbrier Area for purposes of this Section 106 review.

As the undertaking would not result in physical effects, the identification effort focused on identifying properties where setting and feeling are characteristics contributing to a property's NRHP eligibility, as they are the type of historic properties most sensitive to the effects of aircraft overflights. These may include isolated properties where a cultural landscape is part of the property's significance, rural historic districts, outdoor spaces designed for meditation or contemplation, and certain traditional cultural properties (TCPs) in ongoing use. In so doing, the FAA has taken into consideration the views of tribes, consulting parties, past planning, research and studies, the magnitude and nature of the undertaking, the degree of Federal involvement, the nature and extent of potential effects on historic properties, and the likely nature of historic properties within the APE in accordance with 36 CFR 800.4(b)(1).

In accordance with 36 CFR 800.4, the FAA has made a reasonable and good faith effort to identify historic properties within the APE. Those efforts resulted in identification of 15 historic properties, including the Elkmont Historic District, which includes 30 contributing properties within the APE listed in **Attachment D** and shown in the APE map provided in **Attachment B**. In prior Section 106 consultation letters, the contributing properties within Elkmont Historic District were reported as individual historic properties. Additionally, the FAA has looked more closely at the Elkmont Historic District National Register Nomination and determined four properties previously identified as contributing resources do not contribute to the significance of the historic district. These properties are: Swan Cabin, Wonderland Hotel (demolished in 2016), Parrott Cabin, and Young Cabin. The Greenbrier Area has been added to the list of historic properties identified in the APE since the FAA's February 4, 2022 Section 106 consultation letter.

Summary of Section 106 Consultation with Tribes

The FAA contacted eight federally recognized tribes via letter on March 26, 2021, inviting them to participate in Section 106 consultations and to request their expertise regarding historic properties, including TCPs that may be located within the APE. On August 30, 2021, the FAA sent the identified federally recognized tribes a Section 106 consultation letter describing the proposed undertaking in greater detail in which we proposed an APE and provided the results of our preliminary identification of historic properties.

On September 9, 2021, the agencies met with Stephen Yerka, Historic Preservation Specialist at the Eastern Band of Cherokee Indians. During the conversation, Stephen Yerka indicated that there were TCPs located throughout the park, noting the particular significance of Clingman's Dome. The FAA

responded to this comment by stating that the draft ATMP had already distanced the existing route to be further away from Clingman's Dome.

Between December 1, 2021 and January 21, 2022, the FAA sent follow-up emails to tribes that did not respond to our prior Section 106 consultation requests once again inviting them to participate in Section 106 consultations. The FAA followed up with phone calls to those tribes that did not respond to our prior correspondence. The FAA received responses from three tribes – Catawba Indian Nation, Cherokee Nation, and Eastern Band of Cherokee Indians – expressing interest in participating in Section 106 consultation for the undertaking. One tribe, Chickasaw Nation, opted out of further Section 106 consultation for the undertaking. The tribes the FAA contacted as part of this undertaking are included in the list of consulting parties enclosed as **Attachment C**. Other than the Eastern Band of Cherokee Indians, no other tribes have identified historic properties or TCPs in response to the FAA's March, and August 2021, and February 2022 Section 106 consultation letters.

Assessment of Effects

The undertaking could have an effect on a historic property if it alters the characteristics that qualify the property for eligibility for listing or inclusion in the NRHP. The characteristics of the historic properties within the APE that qualify them for inclusion in the NRHP are described in **Attachment D**. Effects are considered adverse if they diminish the integrity of a property's elements that contribute to its significance. The undertaking does not include land acquisition, construction, or ground disturbance and will not result in physical effects to historic properties. FAA, in coordination with NPS, focused the assessment of effects on the potential for adverse effects from the introduction of audible or visual elements that could diminish the integrity of the property's significant historic features.

Assessment of Noise Effects

The undertaking would reduce noise effects to historic properties and therefore would not alter the characteristics of historic properties within the APE in comparison to existing conditions. To assess the potential for the introduction of audible elements, including changes in the character of aircraft noise, the FAA and NPS considered whether there would be a potential change in the annual number, daily frequency, routes or altitude of commercial air tours, as well as the type of aircraft used to conduct those tours.

The ATMP also requires commercial air tours to increase altitudes as compared to those flown under existing conditions. The increase in altitude, which ranges from 1,100 to 1,600 ft. (from a minimum of 1,000 ft. AGL under existing conditions) will reduce the maximum noise levels at sites directly below the commercial air tour routes. It should be noted that when the altitude of an aircraft is increased, the total area exposed to the noise from that aircraft may also increase depending on the surrounding terrain. Although the area exposed to noise might increase, this would not meaningfully affect the acoustic environment because of the attenuation of the noise from the higher altitude and transient nature of the impacts.

The proposed ATMP specifically alters four of the existing air tour routes to minimize overflights of historic properties. Specifically, routes were moved away from Appalachian Trail, Clingman's Dome, Elkmont Historic District, Voorheis Estate, Little Greenbrier School, and Walker Sisters Place.

The ATMP authorizes the use of the BHT-206-L1, BHT-206-L3, BHT-206-B, R-44-44, R-44-II, and R-44-RavenII helicopters, the same aircraft currently in use and any new or replacement aircraft must not exceed the noise level produced by the aircraft being replaced.

For purposes of assessing noise impacts from commercial air tours on the acoustic environment of the Park under the National Environmental Policy Act (NEPA), the FAA noise evaluation is based on Yearly³ Day Night Average Sound Level (Ldn or DNL); the cumulative noise energy exposure from aircraft over 24 hours. The DNL analysis indicates that the undertaking would not result in any noise exposure that would be “significant” or “reportable” under FAA’s policy for NEPA.⁴

As part of the ATMP noise analysis, the NPS provided supplemental metrics to further assess the impact of commercial air tours in quiet settings. **Attachment E** provides further information about the supplemental noise metrics and presents the noise contours (i.e., graphical illustration depicting noise exposure) from the modeling.

Attachment E also presents noise contours for the Time Above 35 dBA (the amount of time in minutes that aircraft sound levels are above 35 dBA) and Time Above 52 dBA. Noise related to commercial air tours is modeled to be greater than 35 dBA for less than 35 minutes a day within the Park and greater than 52 dBA for less than 5 minutes a day within the Park. The Gatlinburg Inn is situated just south of the location of the greatest duration of noise. Because noise is modeled using conservative assumptions (see **Attachment E**) and implementing the ATMP would result in limiting the number of flights and using the same aircraft to fly at higher altitudes along routes that have been adjusted away from the location of historic properties noise effects are anticipated to decrease under the ATMP.

Because the ATMP would potentially decrease noise levels on historic properties compared to the existing condition, it would not diminish the integrity of any historic property’s significant historic features.

Assessment of Visual Effects

The undertaking would alter the characteristics of historic properties within the APE because there would be an improvement from existing conditions. The level of commercial air tour activity under the ATMP is expected to improve or remain the same. The ATMP sets the number of commercial air tours consistent with the three-year average from 2017-2019 and implements limits on the number of flights and times of day during which commercial air tours are able to operate. These limits do not currently exist.

Recognizing that some types of historic properties may be affected by visual effects of commercial air tours, the FAA and NPS considered the potential for the introduction of visual elements that could alter the characteristics of a historic property that qualifies it for inclusion in the NRHP. Aircraft are transitory elements in a scene and visual impacts tend to be relatively short. The short duration and low number of flights make it unlikely a historic property would experience a visual effect from the undertaking. One’s perspective of or viewshed from a historic property is often drawn to the horizon and aircraft at higher altitudes are less likely to be noticed. Aircraft at lower altitudes may attract visual attention but are also more likely to be screened by vegetation.

³ Yearly conditions are represented as the Average Annual Day (AAD)

⁴ Under FAA policy, an increase in the Day-Night Average Sound Level (DNL) of 1.5 dBA or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dBA noise exposure level, or that will be exposed at or above the DNL 65 dBA level due to a DNL 1.5 dBA or greater increase, is significant. FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, Exhibit 4-1. Noise increases are “reportable” if the DNL increases by 5 dB or more within areas exposed to DNL 45-60 dB, or by 3 dB or more within areas exposed to DNL 60-65 dB. FAA Order 1050.1F, Appendix B, section B-1.4.

The FAA and NPS also considered the experience of tribal members who may be conducting ceremonies or practices that could involve looking toward the sky. The ATMP includes a provision for the NPS to establish temporary no-fly periods for special events such as tribal ceremonies or other similar events with a minimum of one week notice to the operator. This, along with the requirements for the operators to fly designated routes, represents an improvement over existing conditions where no such provision exists.

Under existing conditions, commercial air tours at the Park are generally flown on six different routes, though they are not required to fly on any particular route. The Appalachian National Scenic Trail is a historic property within the APE significant for its views, among other factors. Under the ATMP, existing commercial air tour routes would be modified away from the Appalachian National Scenic Trail to ensure they do not fly within ½ mile of the trail. The ATMP would prohibit commercial air tours within ½ mile of the trail. This prohibition helps preserve the scenic values of the trail that contribute to its historical significance. Further, the two routes that fly nearest to the Appalachian National Scenic Trail would be limited under the ATMP to a maximum of 43 tours annually, limits that do not exist under the existing condition (IOA).

The ATMP limits the annual number of commercial air tours to 946 and includes designated routes that modify the current routes flown by the operators over the Park to avoid potential visual and audible effects to historic properties. Therefore, visual effects to historic properties are expected to decrease compared to impacts currently occurring because the number of authorized flights under the ATMP will be the same or less than the average number of flights from 2017-2019, and four of the six routes would be relocated in order to limit audible and visual effects to historic properties. As a result of provisions in the ATMP such as the increase in altitude of flights, adjustment of route locations, and limits to the daily frequency and time of day flights can operate, the undertaking would not introduce visual elements that would alter the characteristics of any historic property that qualifies it for inclusion in the NRHP.

Finding of No Adverse Effect Criteria

To support a Finding of No Adverse Effect, an undertaking must not meet any of the criteria set forth in the Advisory Council on Historic Preservation's Section 106 regulations at 36 CFR 800.5(a). This section demonstrates the undertaking does not meet those criteria. The undertaking would not have any physical impact on any property. The undertaking is located in the airspace above historic properties and would not result in any alteration or physical modifications to these resources. The undertaking would not remove any property from its location. The undertaking would not change the character of any property's use or any physical features in any historic property's setting. As discussed above, the undertaking would not introduce any audible or visual elements that would diminish the integrity of the significant historical features of any historic properties in the APE. The undertaking would not cause any property to be neglected, sold, or transferred.

Proposed Finding and Request for Review and Concurrence

FAA and NPS approval of the undertaking would not alter the characteristics of any historic properties located within the APE as the undertaking would represent a reduction in audible and visual effects on historic properties when compared to existing conditions. Based on the above analysis, the FAA and NPS propose a finding of no adverse effect on historic properties. We request that you review the information and respond whether you concur with the proposed finding within thirty days of receiving this letter.

Should you have any questions regarding any of the above, please contact Judith Walker at 202-267-4185 or Judith.Walker@faa.gov and copy the ATMP team at ATMPTeam@dot.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Judith Walker', with a long horizontal flourish extending to the right.

Judith Walker
Federal Preservation Officer
Senior Environmental Policy Analyst
Environmental Policy Division (AEE-400)
Federal Aviation Administration

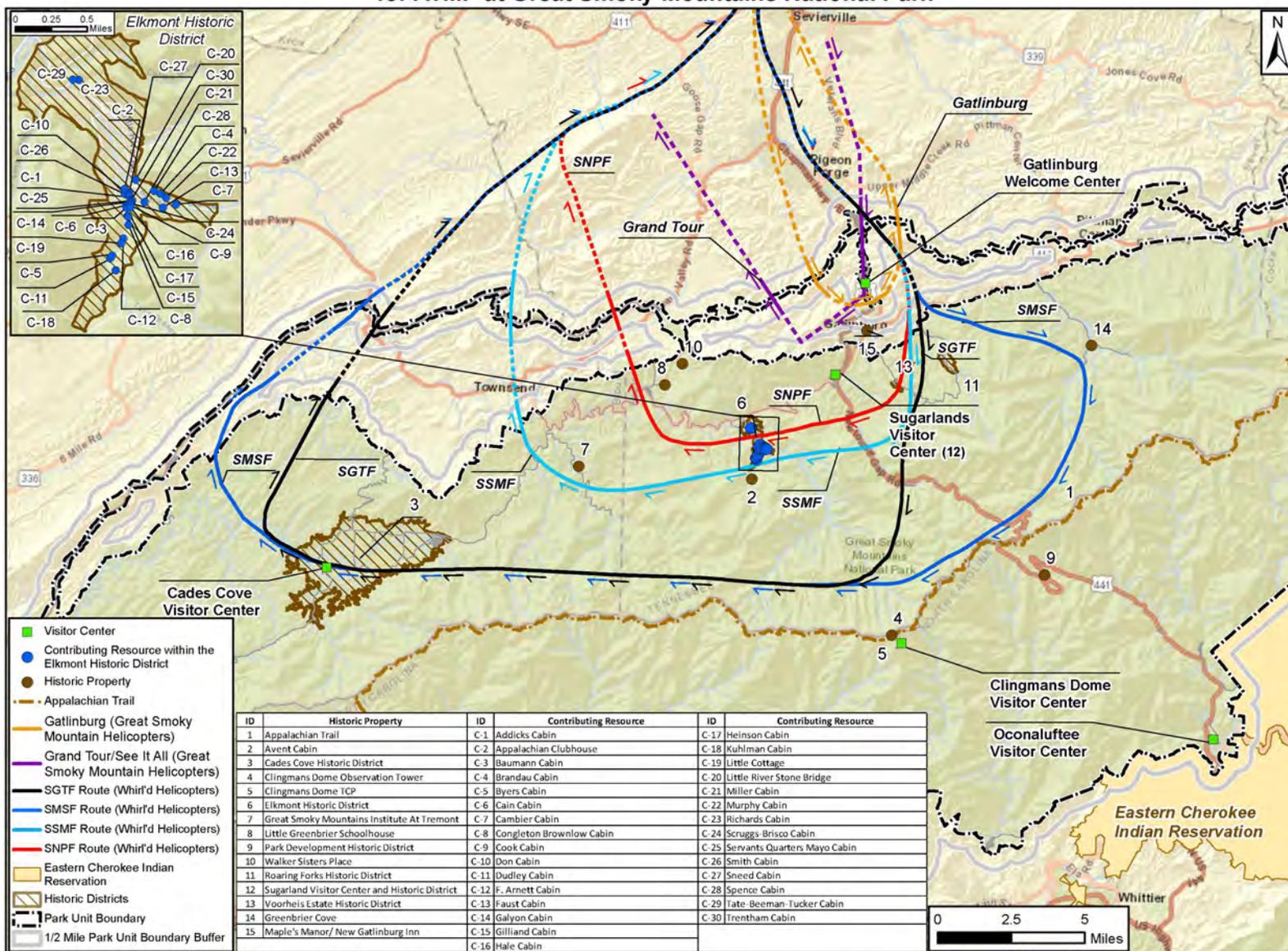
Attachments

- A. Map of Existing Commercial Air Tour Routes
- B. APE Map including Proposed Commercial Air Tour Routes
- C. List of Consulting Parties
- D. List of Historic Properties in the APE and Description of Historic Characteristics
- E. Methodology of NEPA Technical Noise Analysis

ATTACHMENT A

**Map of Existing Commercial Air Tour Routes
Including Identified Historic Properties**

Map of Existing Air Tour Routes with Location of Identified Historic Properties for ATMP at Great Smoky Mountains National Park

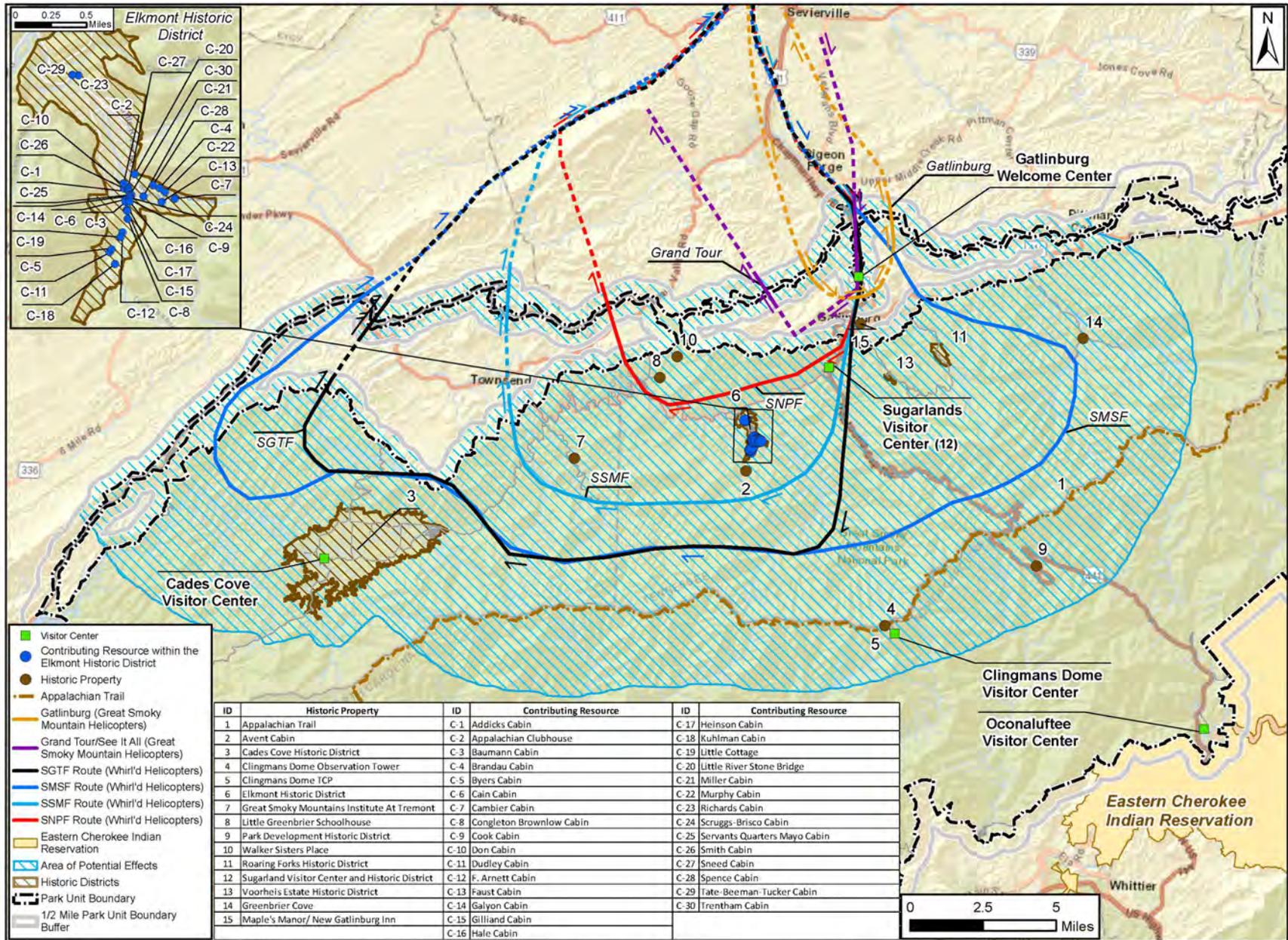


ATTACHMENT B

Area of Potential Effects Map

Including Commercial Air Tour Routes under the ATMP

Area of Potential Effects Map for ATMP at Great Smoky Mountains National Park (Proposed Air Tour Routes)



ATTACHMENT C

List of Additional Consulting Parties Invited to Participate in Section 106 Consultation

A Walk In the Woods
Alabama-Coushatta Tribe of Texas ¹
Blount County
Catawba Indian Nation
Cherokee Nation
Cherokee National Forest
Chickasaw Nation ²
Coushatta Tribe of Louisiana ¹
Eastern Band of Cherokee Indians
Gatlinburg
Great Smoky Mountain Helicopters Inc. (Smoky Mountain Helicopters, M Helicopters of TN, Delta Helicopters, Cherokee Helicopters)
Muscogee Creek Nation
Nantahala National Forest
National Trust for Historic Preservation
North Carolina State Historic Preservation Office
Pigeon Forge
Pisgah National Forest
Sevier County
Tennessee State Historic Preservation Office
Tennessee Valley Authority/Fontana Dam
United Keetoowah Band of Cherokee Indians in Oklahoma ¹
Whirl'd Helicopters, Inc. (formerly Rambo Helicopter Charter, Inc. dba Scenic Helicopter Tours)

¹Tribe received follow up email and/or phone calls in December 2021 and January 2022.

²Tribe opted out of Section 106 consultation

ATTACHMENT D

List of Historic Properties in the APE

Property Name	Property Type	NRHP Status	Summary of Character Defining Elements
Appalachian Trail	Landscape	Eligible	The Appalachian Trail is a significant cultural landscape that reveals the history of human use and settlement along the Appalachian Mountain range and the resulting distinct regional traditions. Visitors to the trail have the unique opportunity to interact with the communities and resources representing diverse eras in U.S. history and pre-history. The trail provides a direct physical link to Great Smoky Mountains National Park. Visitors are afforded sweeping views of vast landscapes extending beyond the trail corridor.
Avent Cabin	Building	Listed	Avent Cabin is listed in the NRHP under Criterion B for its association with Mayna Treanor Avent and Criterion C as a representative example of log structure built during the mid-nineteenth century. The cabin is the last surviving example of this property type on the banks of Jakes Creek. Significant characteristics of the building include its single-pen design and use of logs as a construction material.
Cades Cove Historic District	Historic District	Listed	Cades Cove Historic District is significant as an intact example of a community that valued traditional agricultural practices. The buildings within the district reflect the materials, skills, and needs of the people that first inhabited them. Buildings are situated close to the fields of the farms, water, and other resources needed to support life in a frontier area. Though many buildings have been relocated or reconstructed, great care has been taken to preserve the architectural form, materials, and appearance.

Property Name	Property Type	NRHP Status	Summary of Character Defining Elements
Clingman's Dome	Traditional Cultural Property	Eligible	Identified by Eastern Band of Cherokee Indians as significant.
Clingman's Dome Observation Tower	Structure	Listed	Clingman's Dome Observation Tower was constructed in 1959. It is a prominent example of National Park Service Modern architecture, which broke away from the long-standing "rustic" style of the National Park Service. It is additionally significant as a representation of the National Park Service's Mission 66 program.
Elkmont Historic District	Historic District	Listed	The Elkmont Historic District is listed in the NRHP under Criteria A and C for its architectural and historical significance. The district is significant as the only remaining collection of early 20 th century resort cabins retaining integrity in the Appalachian Mountains of Tennessee. It is also significant as representative of rustic or vernacular architecture of the early 20 th century. The historic district contains 32 contributing properties.
Great Smoky Mountains Institute	Building	Eligible	The Great Smoky Mountains Institute was constructed on the site of a logging camp. It was established in the early 1960s as a Job Corps Center and between 1969 and 1979 operated as the Tremont Environmental Education Center in a partnership between Maryville College and the National Park Service. The buildings are representative of the National Park Service's Mission 66 program.
Little Greenbrier Schoolhouse	Building	Listed	Little Greenbrier School House is significant as an example of a late 19 th century schoolhouse and church in rural Tennessee. It is additionally significant as an example of architecture associated with the practice of Primitive Baptism.
Park Development Historic District	Historic District	Eligible	The Park Development Historic District is eligible under Criteria A and C. It encompasses the original automobile circulation system and major developed areas accessed in Great Smoky Mountains National Park during the period of significance from 1933 to 1942.

Property Name	Property Type	NRHP Status	Summary of Character Defining Elements
Walker Sisters' Place	Building Complex	Listed	The Walker Sisters' Place is significant as a late-period example of a traditional homestead within Great Smoky Mountains National Park. The agricultural complex features a variety of nineteenth century agricultural outbuildings that remained in continuous use through the middle of the twentieth century.
Roaring Forks Historic District	Historic District	Listed	The valley of the Roaring Fork is significant for its collection of late 19 th and early 20 th century agricultural buildings set within the extremely narrow, rock-strewn hollow.
Sugarlands	Historic District	Eligible	The Sugarlands is a valley in the north-central Great Smoky Mountains formerly home to a string of small Appalachian communities. The area was named by Euro-American settlers who made syrup from sugar maple trees found in the area.
Voorheis Estate	Cultural Landscape	Eligible	The Voorheis estate is a cultural landscape within the North District of Great Smoky Mountains National Park. The 38-acre site encompasses the former mountain retreat developed by Lois E. Voorheis between 1928 and 1944. The estate is an example of rustic style of architecture and landscape architecture which is evident in the form of structures, designed water features, and the intentional use of natural materials. Numerous flowers, shrubs, and trees were planted for ornamental color, visual character, and to outline walks with seasonal color.
Greenbrier Cove	Structure	Eligible	Identified by "A Walk in the Woods." The Greenbrier Area consists of significant historic resources that help share the story of early mountain settlements within the boundaries of the Park. The Greenbrier Area consists of numerous cemeteries, rock walls, chimneys, and a few preserved cabins and outbuildings.

Property Name	Property Type	NRHP Status	Summary of Character Defining Elements
Maples Manor/New Gatlinburg Inn	Building	Listed	Maples Manor/New Gatlinburg Inn is locally significant and eligible under Criterion C for architecture. The hotel experienced a variety of unsympathetic alterations during the late twentieth century, many of which have been removed or modified during more recent renovation projects.

ATTACHMENT E

Summary of Noise Technical Analysis from NEPA Review

There are numerous ways to measure the potential impacts from commercial air tours on the acoustic environment of a park, including intensity, duration, and spatial footprint of the noise. The metrics and acoustical terminology used for the ATMPs are shown in the table below.

Metric	Relevance and citation
Day-night average sound level, L_{dn} (or DNL)	<p>The logarithmic average of sound levels, in dBA, over a 24-hour day, DNL takes into account the increased sensitivity to noise at night by including a ten dB penalty between 10 p.m. and 7 a.m. local time.</p> <p>The FAA's indicators of significant impacts are for an action that would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe⁵.</p>
Equivalent sound level, $L_{Aeq, 12\text{ hr}}$	<p>The logarithmic average of commercial air tour sound levels, in dBA, over a 12-hour day. The selected 12-hour period is 7 a.m. to 7 p.m. to represent typical daytime commercial air tour operating hours.</p> <p>Note: Both $L_{Aeq, 12\text{ hr}}$ and L_{dn} characterize:</p> <ul style="list-style-type: none"> • Increases in both the loudness and duration of noise events • The number of noise events during specific time period (12 hours for $L_{Aeq, 12\text{ hr}}$ and 24-hours for L_{dn}) <p>However, DNL takes into account the increased sensitivity to noise at night by including a ten dB penalty between 10 p.m. and 7 a.m. local time. If there are no nighttime events, $L_{Aeq, 12\text{ hr}}$ will be three dB higher than DNL.</p>
Time Above 35 dBA ⁶	<p>The amount of time (in minutes) that aircraft sound levels are above a given threshold (i.e., 35 dBA)</p>

⁵ FAA Order 1050.1F, Exhibit 4-1

⁶ dBA (A-weighted decibels): Sound is measured on a logarithmic scale relative to the reference sound pressure for atmospheric sources, 20 μPa . The logarithmic scale is a useful way to express the wide range of sound pressures perceived by the human ear. Sound levels are reported in units of decibels (dB) (ANSI S1.1-1994, American National Standard Acoustical Terminology). A-weighting is applied to sound levels in order to account for the

	In quiet settings, outdoor sound levels exceeding 35 dB degrade experience in outdoor performance venues (ANSI 12.9-2007, Quantities And Procedures For Description And Measurement Of Environmental Sound – Part 5: Sound Level Descriptors For Determination Of Compatible Land Use); Blood pressure increases in sleeping humans (Haralabidis et al., 2008); maximum background noise level inside classrooms (ANSI/ASA S12.60/Part 1-2010, Acoustical Performance Criteria, Design Requirements, And Guidelines For Schools, Part 1: Permanent Schools).
Time Above 52 dBA	The amount of time (in minutes) that aircraft sound levels are above a given threshold (i.e., 52 dBA) This metric represents the level at which one may reasonably expect interference with Park interpretive programs. At this background sound level (52 dB), normal voice communication at five meters (two people five meters apart), or a raised voice to an audience at ten meters would result in 95% sentence intelligibility. ⁷
Maximum sound level, L _{max}	The loudest sound level, in dBA, generated by the loudest event; it is event-based and is independent of the number of operations. L _{max} does not provide any context of frequency, duration, or timing of exposure.

For aviation noise analyses under the National Environmental Policy Act (NEPA), the FAA determines the cumulative noise energy exposure of individuals resulting from aviation activities in terms of an Average Annual Day (AAD). However, because ATMP operations in the park occur at low annual operational levels and are highly seasonal in nature it was determined that a peak day representation of the operations would more adequately allow for disclosure of any potential impacts. A peak day has therefore been used as a conservative representation of assessment of AAD conditions required by FAA policy. The 90th percentile day was identified for representation of a peak day and derived from the busiest year of commercial air tour activity from 2017-2019, based on the total number of commercial air tour operations and total flight miles over the Park. It was then further assessed for the type of aircraft and route flown to determine if it is a reasonable representation of the commercial air tour activity at the Park.

For the Park, the 90th percentile day was identified as the following:

- Red Route (SNPF) – three flights, BHT-206-L1 aircraft
- Light Blue Route (SSMF) – one flight, BHT-206-L1 aircraft
- Blue Route (SMSF) – one flight, BHT-206-L1 aircraft
- Orange Route (Gatlinburg) – one flight, Bell 206-L aircraft
- Purple Route (Grand Tour/See It All) – one flight, Bell 206-L aircraft

sensitivity of the human ear (ANSI S1.42-2001, Design Response of Weighting Networks for Acoustical Measurements). To approximate human hearing sensitivity, A-weighting discounts sounds below 1 kHz and above 6 kHz.

⁷ Environmental Protection Agency. Information on Levels of Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety, March 1974.

Noise contours for the acoustic indicators were developed using the Federal Aviation Administration's Aviation Environmental Design Tool (AEDT) version 3d and are provided below. A noise contour presents a graphical illustration or “footprint” of the area potentially affected by the noise.

- Time above 35 dBA (minutes) – see Figure 1
- Time above 52 dBA (minutes) – see Figure 2
- Equivalent sound level, $L_{Aeq, 12hr}$ – see Figures 3 and 4
 - Note: Contours are not presented for L_{dn} (or DNL) as it is arithmetically three dBA lower than $L_{Aeq, 12hr}$ if there are no nighttime events, which is the case for the ATMP modeled at the Park.
- Maximum sound level or L_{max} – see Figure 5

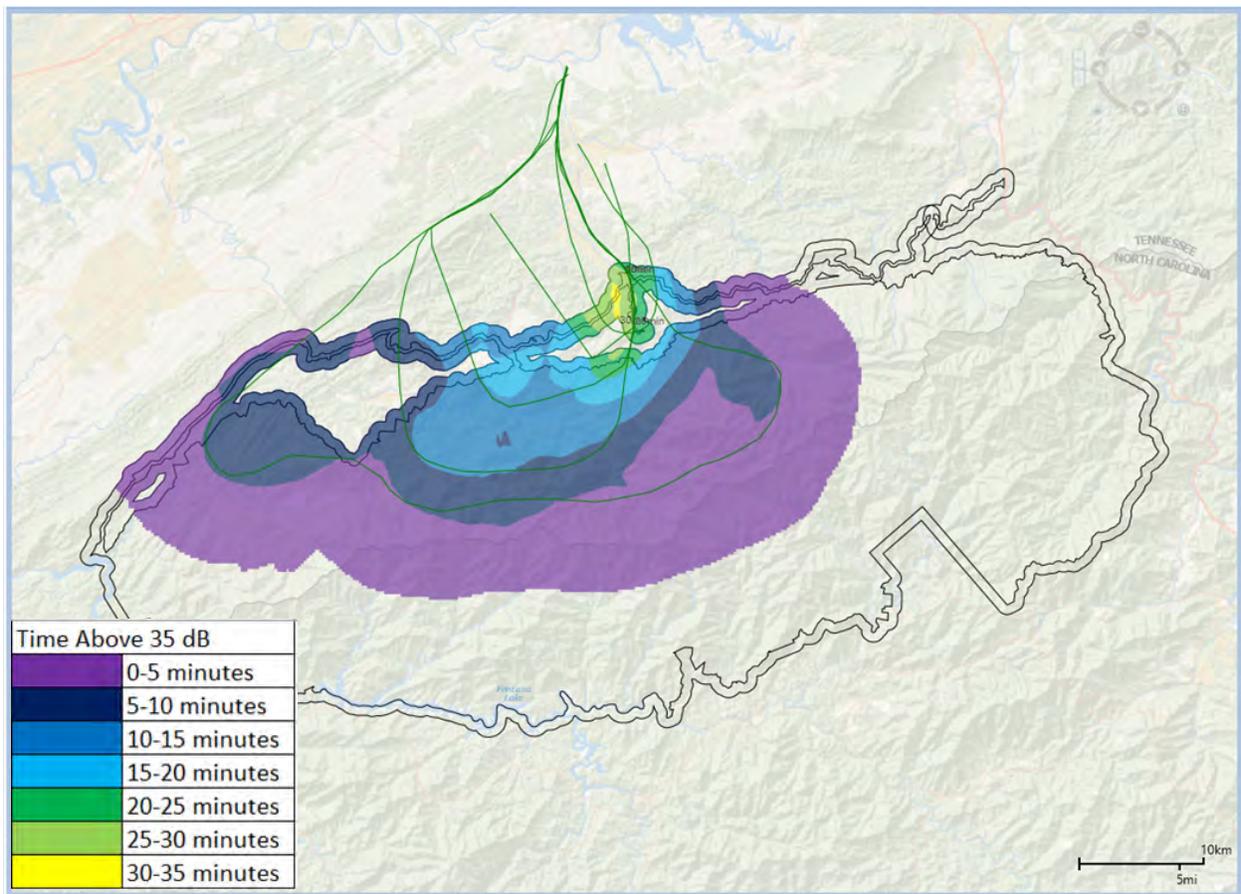


Figure 1. Noise contour results for Time Above 35 dBA

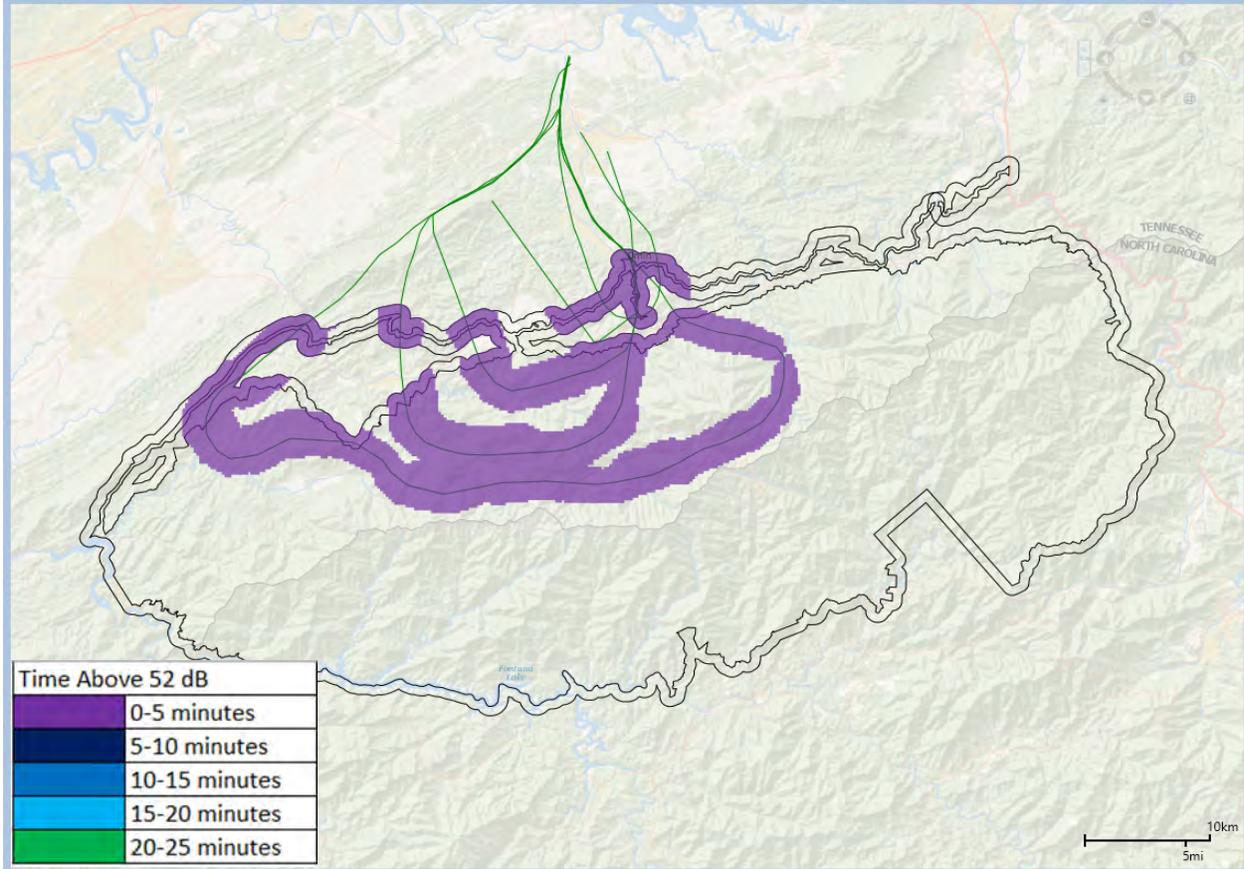


Figure 2. Noise contour results for Time Above 52 dBA

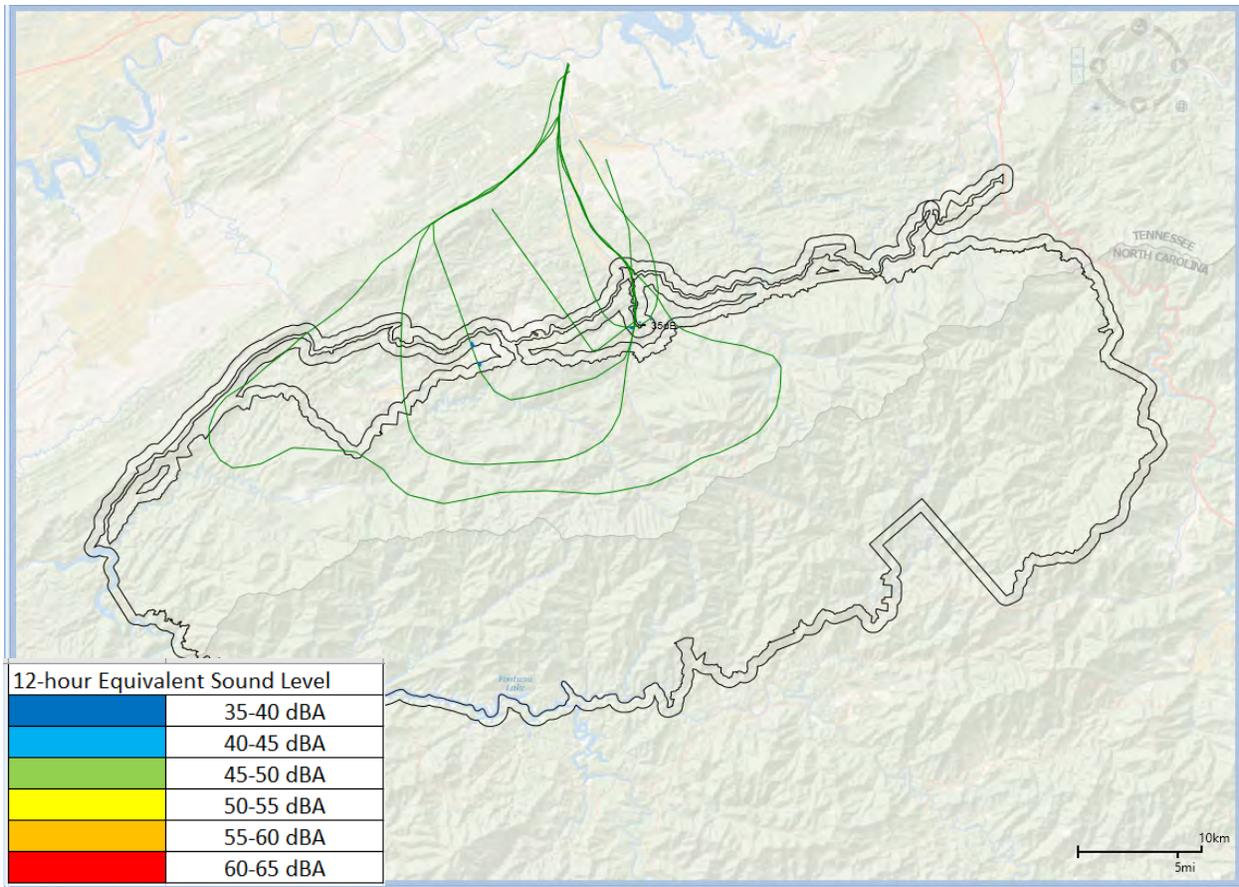


Figure 3. Noise contour results for $L_{Aeq, 12hr}$

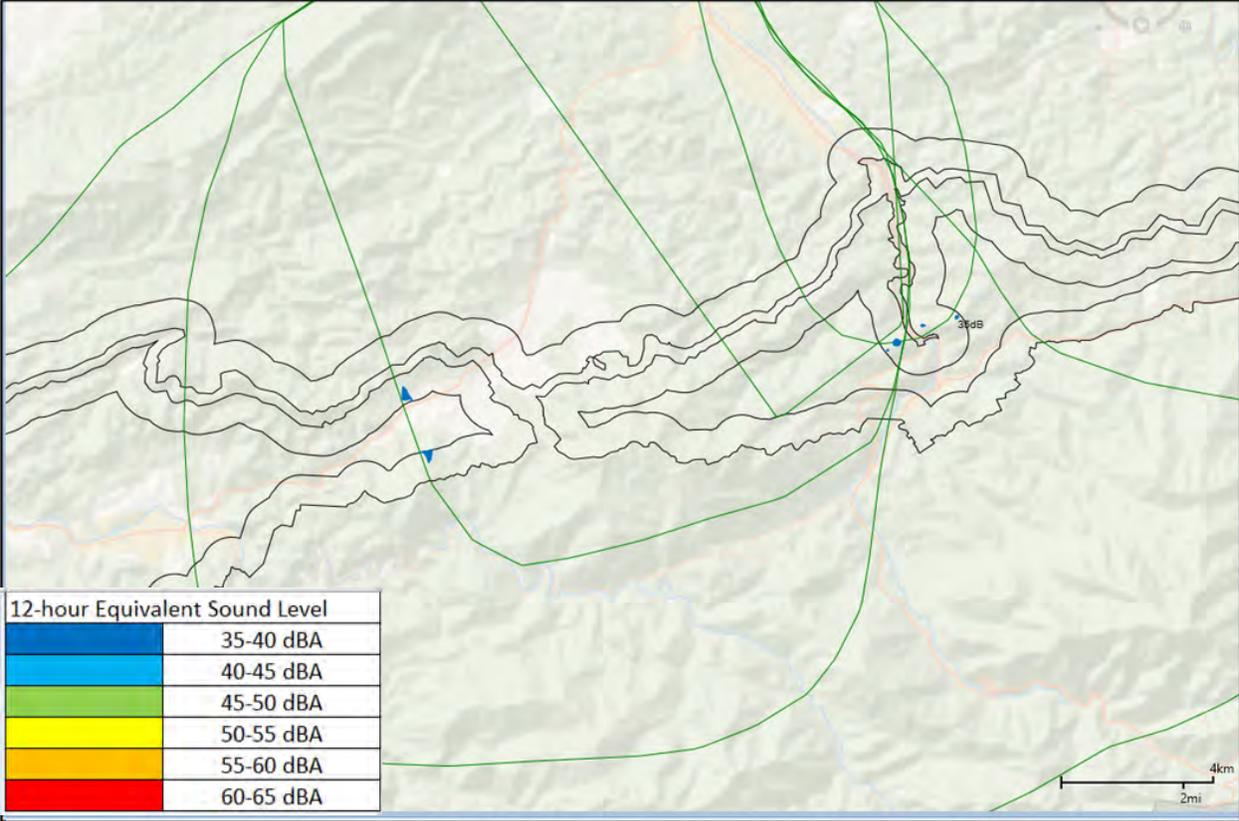


Figure 4. Zoomed in noise contour results for $L_{Aeq,12hr}$

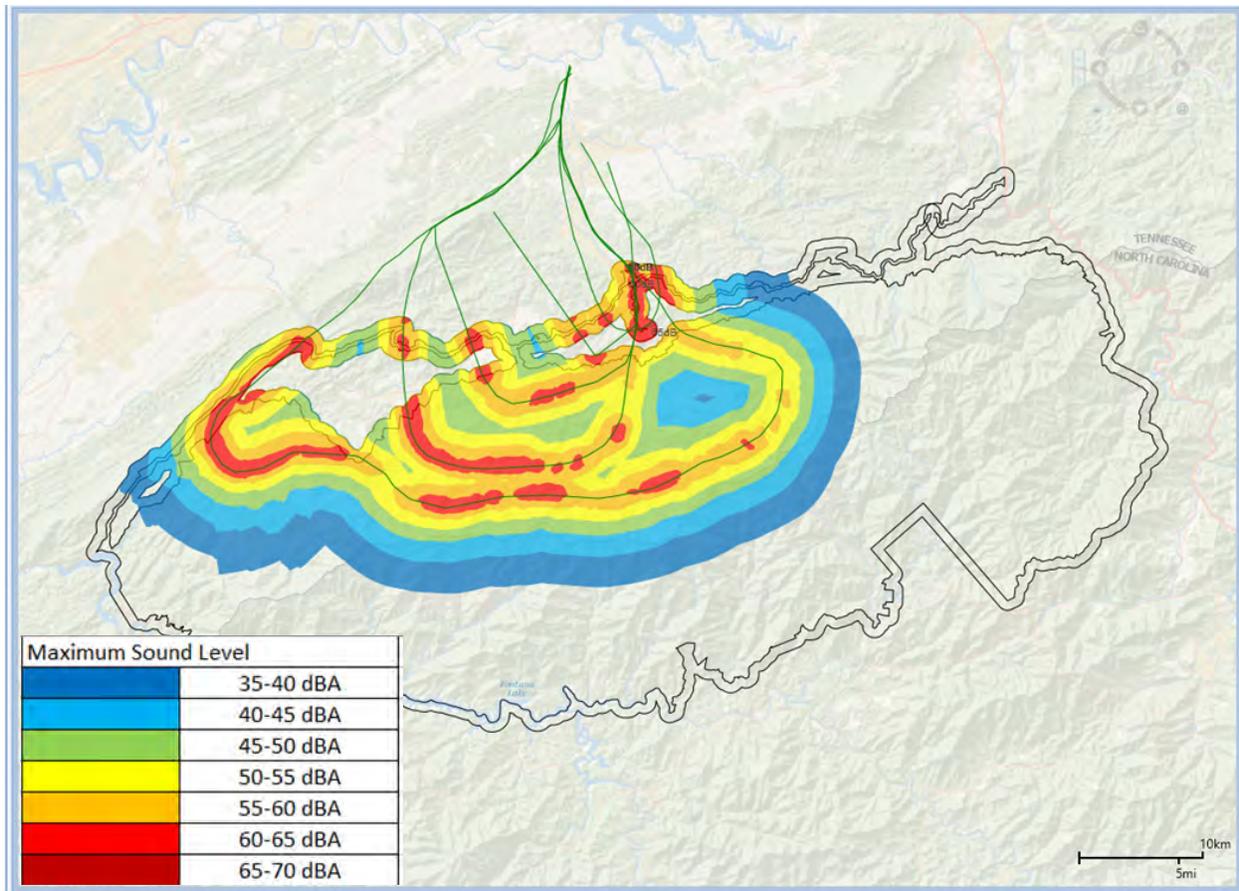


Figure 5. Noise contour results for L_{max}



United States Department of Transportation
FEDERAL AVIATION ADMINISTRATION
Office of Policy, International Affairs & Environment
Office of Environment and Energy

NATIONAL PARKS AIR TOUR MANAGEMENT PROGRAM

May 3, 2022

Re: Continuing Section 106 Consultation and Finding of No Adverse Effect under Section 106 of the National Historic Preservation Act for the development of an Air Tour Management Plan for Great Smoky Mountains National Park

E. Patrick McIntyre, Jr.
Executive Director and State Historic Preservation Officer
Tennessee State Historic Preservation Office
2941 Lebanon Pike
Nashville, TN 37214

Dear E. Patrick McIntyre:

Introduction

The Federal Aviation Administration (FAA), in coordination with the National Park Service (NPS), seeks to continue Section 106 consultation with your office under Section 106 of the National Historic Preservation Act (NHPA) for the development of an Air Tour Management Plan (ATMP) for Great Smoky Mountains National Park (Park). At this time, the FAA requests your concurrence with its proposed finding of “no adverse effect” on historic properties, in accordance with 36 CFR 800.5(c). On this date, we are also notifying all consulting parties of this proposed finding and providing the documentation below for their review.

In accordance with the requirements of 36 CFR 800.11(e), this letter describes the undertaking, including: changes that have occurred since the draft ATMP was issued to the public; the Area of Potential Effect (APE); a description of steps taken to identify historic properties; a description of affected historic properties in the APE and the characteristics that qualify them for the National Register of Historic Places (NRHP); and an explanation of why the criteria of adverse effect do not apply to this undertaking. This letter also describes the Section 106 consultation process and public involvement completed for this undertaking.

The FAA initiated Section 106 consultation with your office by letter dated March 29, 2021. In a follow-up letter dated August 30, 2021, we described the proposed undertaking in more detail, proposed a preliminary APE, and provided our initial list of historic properties identified within the APE. FAA conducted additional identification efforts and provided a revised list of historic properties in our most recent correspondence dated February 4, 2022. Similar letters were sent to all consulting parties.

Public involvement for this undertaking was integrated with the National Parks Air Tour Management Act (NPATMA) process. We issued the draft ATMP on September 3, 2021, and notice of the availability of the draft was published in the Federal Register. The public comment period for the draft ATMP extended from September 3, 2021, through October 13, 2021. A public meeting was held on September 16, 2021. The results of our Section 106 consultation with tribes are described below.

The FAA and NPS received three public comments requesting the agencies ensure protection of cultural resources within the APE for the ATMP. These comments were general in nature and broadly encouraged the agencies to comply with Section 106 of the NHPA. The FAA and NPS also received public comments expressing concern about the potential noise and visual effects resulting from commercial air tours. None of these comments specifically related to historic properties or the undertaking's potential effect on them.

Description of the Undertaking

The FAA and the NPS are developing ATMPs for 24 parks, including Great Smoky Mountains National Park. The ATMPs are being developed in accordance with NPATMA. Each ATMP is unique and therefore, each ATMP is being assessed individually under Section 106.

Commercial air tours have been operating over the Park for over 20 years. Since 2005, these air tours have been conducted pursuant to interim operating authority (IOA) issued by FAA in accordance with NPATMA. IOA does not provide any operating conditions (e.g., routes, altitudes, time of day, etc.) for air tours other than a limit of 1,920 air tours per year over the Park and Eastern Cherokee tribal lands within ½ mile of the Park's boundary. The ATMP will replace IOA for both the Park and tribal lands. The ATMP will not regulate the airspace over tribal lands belonging to the Eastern Band of the Cherokee Indians more than ½ mile outside the Park boundary.

The FAA and the NPS have documented the existing conditions for commercial air tour operations at the Park. The FAA and the NPS consider the existing operations for commercial air tours to be an average of 2017-2019 annual air tours flown, which is 946 air tours. The agencies decided to use a three-year average because it reflects the most accurate and reliable air tour conditions based on available operator reporting, and accounts for variations across multiple years, excluding more recent years affected by the COVID 19 pandemic. Commercial air tours currently are conducted in BHT-206-L1, BHT-206-L3, BHT-206-B, R-44-44, R-44-II, and R-44-RavenII helicopters. Commercial air tour operations presently fly between 1,000 and 1,500 ft. above ground level (AGL).¹ Under existing conditions, commercial air tours are conducted along the routes shown in **Attachment A**.

The undertaking for purposes of Section 106 is implementing the ATMP that applies to all commercial air tours over the Park and within ½ mile outside the boundary of the Park, including tribal lands belonging to the Eastern Band of the Cherokee Indians within ½ mile of the Park's boundary. A commercial air tour subject to the ATMP is any flight conducted for compensation or hire in a powered aircraft where a purpose of the flight is sightseeing over the Park, or within ½ mile of the Park boundary, during which the aircraft flies:

¹ Altitude expressed in units above ground level (AGL) is a measurement of the distance between the ground surface and the aircraft, whereas altitude expressed in median sea level (MSL) refers to the altitude of aircraft above sea level, regardless of the terrain below it. Aircraft flying at a constant MSL altitude would simultaneously fly at varying AGL altitudes, and vice versa, assuming uneven terrain is present below the aircraft.

- (1) Below 5,000 feet above ground level (except solely for the purposes of takeoff or landing, or necessary for safe operation of an aircraft as determined under the rules and regulations of the FAA requiring the pilot-in-command to take action to ensure the safe operation of the aircraft); or
- (2) Less than one mile laterally from any geographic feature within the Park (unless more than ½ mile outside the Park boundary).

The undertaking would result in commercial air tours being conducted along the routes shown in **Attachment B**. The new routes are based on the existing conditions but modified so that the routes avoid flying directly over the following historic properties: Appalachian National Scenic Trail, Cades Cove Historic District, Clingman's Dome, Great Smoky Mountains Institute at Tremont, Elkmont Historic District, Walker Sisters Place, Voorheis Estate, and Little Greenbrier School.

The undertaking was previously described in detail in our Section 106 consultation letter to you dated August 30, 2021. The following elements of the ATMP have remained unchanged since the issuance of the draft ATMP to the public.

- A maximum of 946 commercial air tours are authorized per year on the routes depicted in **Attachment B**, none of which fly over, or can be seen or heard from, tribal lands belonging to the Eastern Band of the Cherokee Indians;
- Air tours will fly no lower than 2,600 ft. AGL.
- The aircraft type authorized for commercial air tours are BHT-206-L1, BHT-206-L3, BHT-206-B, R-44-44, R-44-II, and R-44-RavenII helicopters. Any new or replacement aircraft must not exceed the noise level produced by the aircraft being replaced;
- Commercial air tours authorized under this ATMP shall be conducted on designated air tour routes specific to each operator and as described below:

Whirl'd Helicopters, Inc.:

- Red Route (SNPF): Air tours along the Red Route (SNPF) will follow the road corridors of Highway 321, Highway 441, Little River Road, and Wear Cove Gap Road. As this route turns north to exit the Park, the route will fly west of Wear Cove Gap Road.
- Light Blue Route (SSMF): Air tours along the Light Blue Route (SSMF) will enter the Park following along the road corridors of Highway 321 and Highway 441. Air tours on the Light Blue Route (SSMF) will stay at least one mile south of the Elkmont Historic District and Tremont.
- Black Route (SGTF): Air tours along the Black Route (SGTF) will enter the Park following along the road corridors of Highway 321 and Highway 441. Air tours will stay at least one-half mile north of the Appalachian National Scenic Trail and one mile north of Cades Cove Historic District.
- Blue Route (SMSF): Air tours along the Blue Route (SMSF) will stay at least one-half mile north of the Appalachian National Scenic Trail and one mile north of Cades Cove Historic District.

Great Smoky Mountain Helicopter Inc.:

- Orange Route (Gatlinburg): Air tours along the Orange Route (Gatlinburg) will cross over the Foothills Parkway west of Gatlinburg, head east over the Hwy 321 spur of the Foothills Parkway, and then exit back over the Foothills Parkway east of Gatlinburg. This route will

only overfly the Foothills Parkway and will stay at least ½ mile outside of the remainder of the Park.

- Purple Route (Grand Tour/See It All): Air tours along the Purple Route (Grand Tour/See It All) will fly over the Foothills Parkways along the Hwy 321 spur heading south. The tour routes will then head west and exit the Park west of Gatlinburg. This route will only overfly the Foothills Parkway and will stay at least ½ mile outside of the remainder of the Park.
- Routes assigned as part of this ATMP are intended to protect visitor experience, natural and cultural resources, and acoustic resources of the Park by aligning flight routes with existing transportation corridors, avoiding noise-sensitive wildlife habitat, as well as NRHP- eligible or listed historic properties. Aligning routes with transportation corridors including Highway 321, Highway 441, Little River Road, and Wear Cove Gap Road is intended to mask noise created by air tours. Other specific resource protection measures associated with each route include the following:
 - Red Route (SNPF): The existing route flown by the operator was modified to avoid overflights of Elkmont Historic District, Voorheis Estate, Walker Sisters Place, and Little Greenbrier School historic properties located within the APE.
 - Light Blue Route (SSMF): The existing route flown by the operator was modified to avoid overflights of Elkmont Historic District, Voorheis Estate, and Great Smoky Mountains Institute at Tremont and is intended to protect historic properties within the APE and education/interpretive programming at the Park.
 - Black Route (SGTF): The existing route flown by the operator was modified to avoid overflights of the Appalachian National Scenic Trail, Voorheis Estate, and Cades Cove Historic District, which are historic properties located within the APE.
 - Blue Route (SMSF): The existing route flown by the operator was modified to avoid overflights of the Appalachian National Scenic Trail, Cades Cove Historic District, and Clingman's Dome and is intended to avoid historic properties within the APE.

The ATMP includes restrictions on the number of commercial air tours that the operators may conduct each day. These restrictions provide a maximum number of commercial air tours that will be conducted on Standard Days (total of 5 air tours across all operators), but allow for a limited number of Flex Days on which the maximum number of commercial air tours allowed are slightly higher (total of 7 across all operators).

- Whirl'd Helicopters, Inc. will be able to conduct up to four commercial air tours per day, and Great Smoky Mountain Helicopter, Inc. will be able to conduct up to one commercial air tour per day on Standard Days. The operators will each be authorized to fly up to forty days per year (Flex Days) during which Whirl'd Helicopters, Inc. will be able to conduct up to five commercial air tours per day, and Great Smoky Mountain Helicopter, Inc. will be able to conduct up to two commercial air tours per day.
- Aircraft will not be able to hover or loop while conducting commercial air tours over the Park.
- Commercial air tours may operate two hours after sunrise until two hours before sunset, as defined by the National Oceanic and Atmospheric Administration (NOAA), unless they qualify for the quiet technology incentive.²

² Sunrise and sunset data is available from the NOAA Solar Calculator, <https://www.esrl.noaa.gov/gmd/grad/solcalc/>

- Air tours may operate any day of the year except that the NPS can establish temporary no-fly periods for special events (including tribal ceremonies or other similar events) or planned Park management, with a minimum of one month notice to the operators in writing, absent exigent circumstances or emergency operations;
- The operator is required to install and use flight monitoring technology on all authorized commercial air tours, and to include flight monitoring data in their semi-annual reports to the agencies, along with the number of commercial air tours conducted.
- When made available by Park staff, the operators/pilots will take at least one training course per year conducted by the NPS. The training will include Park information that the operator can use to further their own understanding of Park priorities and management objectives as well as enhance the interpretive narrative for air tour clients and increase understanding of parks by air tour clients;
- At the request of either of the agencies, the Park staff, the local FAA Flight Standards District Office (FSDO), and the operators will meet once per year to discuss the implementation of this ATMP and any amendments or other changes to the ATMP. This annual meeting could be conducted in conjunction with any required annual training;
- For situational awareness when conducting tours of the Park, the operators will utilize frequency 122.9 and report when they enter and depart a route. The pilot should identify their company, aircraft, and route to make any other aircraft in the vicinity aware of their position;
- The FAA and the NPS are both responsible for monitoring and oversight of the ATMP. If the NPS identifies instances of non-compliance, the NPS will report such findings to the FAA's FSDO having geographic oversight for the Park.

A new subsection was added in response to questions and comments regarding the transferability of air tour allocations, or the assumption of allocations of commercial air tours by a successor corporation. The added language makes clear that annual allocations of air tours are not transferrable between operators, though they may be assumed by a successor purchaser. Conditions are included to ensure that the agencies have sufficient time to review the transaction to avoid an interruption of service and the successor operator must acknowledge and agree to the comply with the ATMP. This language is excerpted below:

- Annual operations under the ATMP are non-transferable. An allocation of annual operations may be assumed by a successor purchaser that acquires an entity holding allocations under this ATMP in its entirety. In such case the prospective purchaser shall notify the FAA and the NPS of its intention to purchase the operator at the earliest possible opportunity to avoid any potential interruption in the authority to conduct commercial air tours under the ATMP. This notification must include a certification that the prospective purchase has read and will comply with the terms and conditions in the ATMP. The FAA will consult with the NPS before issuing new or modified operations specifications or taking other formal steps to memorialize the change in ownership.

The agencies revised some of the language related to the quiet technology incentive, but not the incentive itself, in order to clarify that applications for the incentive will be analyzed on a case-by-case basis. The revised language is below:

- The ATMP incentivizes the use of quiet technology aircraft by commercial air tour operators. Operators that have converted to quiet technology aircraft, or are considering converting to quiet technology aircraft may request to be allowed to conduct air tours beginning at sunrise or ending at sunset on all days that flights are authorized. Because aviation technology continues

to evolve and advance and FAA updates its noise certification standards periodically, the aircraft eligible for this incentive will be analyzed on a case-by-case basis at the time of the operator's request to be considered for this incentive. The NPS will periodically monitor Park conditions and coordinate with FAA to assess the effectiveness of this incentive. If implementation of this incentive results in unanticipated effects on Park resources or visitor experience, further agency action may be required to ensure the protection of Park resources and visitor experience.

The draft ATMP and the included maps were edited to clearly identify the tribal lands belonging to the Eastern Band of the Cherokee Indians within ½ mile of the Park boundary. The ATMP was revised to explain that none of the routes designated in the ATMP fly over tribal lands of the Eastern Band of Cherokee Indians. Further edits were made to make clearer that the restrictions imposed by the ATMP apply not only when the operator is flying over lands or waters within the Park boundary but also when the operator is flying over lands or waters outside of the Park but within ½ mile of its boundary.

The agencies also clarified that a plan amendment, and additional environmental review, would be required in order to increase the number of authorized commercial air tours per year above the 946 authorized in the ATMP. The revised language is below:

- Increases to the total number of air tours authorized under the ATMP resulting from accommodation of a new entrant application or a request by an existing operator will require an amendment to the ATMP and additional environmental review.

Area of Potential Effects

The APE for the undertaking was proposed in the Section 106 consultation letter dated August 30, 2021. The undertaking does not require land acquisition, construction, or ground disturbance. In establishing the APE, the FAA sought to include areas where any historic property present could be affected by noise from or sight of commercial air tours over the Park or adjacent tribal lands. The FAA considered the number and altitude of commercial air tours over historic properties in these areas to further assess the potential for visual effects and any incremental change in noise levels that may result in alteration of the characteristics of historic properties qualifying them as eligible for listing in the NRHP.

The APE for the undertaking comprises the Park and a ½ mile outside the boundary of the Park, as depicted in **Attachment B** below. This map also displays the air tour routes authorized under the ATMP. The FAA requested comments from all consulting parties including federally recognized tribes. The FAA has not received any comments regarding the APE from any identified consulting party identified thus far. The changes to the undertaking described above do not have the potential to cause alterations in the character or use of historic properties. The FAA determined the delineated APE adequately captures potential effects from the undertaking on historic properties and is unchanged.

Identification of Historic Properties

Preliminary identification of historic properties relied upon data submitted by NPS park staff about known historic properties within the Park. The Section 106 consultation efforts involved outreach to tribes, the Tennessee Historical Commission, North Carolina State Historic Preservation Office, operators, and other consulting parties including local governments and neighboring federal land managers. Public comments submitted as part of the draft ATMP public review process also informed identification efforts.

The FAA, in cooperation with the NPS, coordinated with Park staff to identify known historic properties located within the APE. The FAA also accessed the Tennessee Historical Commission Viewer, the list of

National Register properties in Tennessee available on the TNSHPO website, including the Multiple Property Documentation Form for Historic Resources of Great Smoky Mountains National Park, and the North Carolina Department of Natural and Cultural Resources' GIS database on November 08, 2021, to collect GIS data for previously-identified properties both inside and outside the Park and consulted with the tribes listed in **Attachment C** regarding the identification of any other previously unidentified historic properties that may also be located within the APE.

On January 28, 2022, Section 106 consulting party "A Walk in the Woods" responded to the FAA's letter dated January 27, 2022. "A Walk in the Woods" requested the Cataloochee, Cosby, and Greenbrier areas of Great Smoky Mountains National Park be identified as historic properties within the APE for the undertaking. The FAA coordinated with the NPS on this request and determined that only the Greenbrier Area falls within the APE. Pursuant to 36 CFR 800.4(c)(2), the FAA considers the Greenbrier Area as eligible for the NRHP under Criterion A for its association with the development of early mountain settlements in eastern Tennessee, and requests concurrence from the Tennessee Historical Commission on the eligibility of the Greenbrier Area for purposes of this Section 106 review.

As the undertaking would not result in physical effects, the identification effort focused on identifying properties where setting and feeling are characteristics contributing to a property's NRHP eligibility, as they are the type of historic properties most sensitive to the effects of aircraft overflights. These may include isolated properties where a cultural landscape is part of the property's significance, rural historic districts, outdoor spaces designed for meditation or contemplation, and certain traditional cultural properties (TCPs) in ongoing use. In so doing, the FAA has taken into consideration the views of tribes, consulting parties, past planning, research and studies, the magnitude and nature of the undertaking, the degree of Federal involvement, the nature and extent of potential effects on historic properties, and the likely nature of historic properties within the APE in accordance with 36 CFR 800.4(b)(1).

In accordance with 36 CFR 800.4, the FAA has made a reasonable and good faith effort to identify historic properties within the APE. Those efforts resulted in identification of 15 historic properties, including the Elkmont Historic District, which includes 30 contributing properties within the APE listed in **Attachment D** and shown in the APE map provided in **Attachment B**. In prior Section 106 consultation letters, the contributing properties within Elkmont Historic District were reported as individual historic properties. Additionally, the FAA has looked more closely at the Elkmont Historic District National Register Nomination and determined four properties previously identified as contributing resources do not contribute to the significance of the historic district. These properties are: Swan Cabin, Wonderland Hotel (demolished in 2016), Parrott Cabin, and Young Cabin. The Greenbrier Area has been added to the list of historic properties identified in the APE since the FAA's February 4, 2022 Section 106 consultation letter.

Summary of Section 106 Consultation with Tribes

The FAA contacted eight federally recognized tribes via letter on March 26, 2021, inviting them to participate in Section 106 consultations and to request their expertise regarding historic properties, including TCPs that may be located within the APE. On August 30, 2021, the FAA sent the identified federally recognized tribes a Section 106 consultation letter describing the proposed undertaking in greater detail in which we proposed an APE and provided the results of our preliminary identification of historic properties.

On September 9, 2021, the agencies met with Stephen Yerka, Historic Preservation Specialist at the Eastern Band of Cherokee Indians. During the conversation, Stephen Yerka indicated that there were TCPs located throughout the park, noting the particular significance of Clingman's Dome. The FAA

responded to this comment by stating that the draft ATMP had already distanced the existing route to be further away from Clingman's Dome.

Between December 1, 2021 and January 21, 2022, the FAA sent follow-up emails to tribes that did not respond to our prior Section 106 consultation requests once again inviting them to participate in Section 106 consultations. The FAA followed up with phone calls to those tribes that did not respond to our prior correspondence. The FAA received responses from three tribes – Catawba Indian Nation, Cherokee Nation, and Eastern Band of Cherokee Indians – expressing interest in participating in Section 106 consultation for the undertaking. One tribe, Chickasaw Nation, opted out of further Section 106 consultation for the undertaking. The tribes the FAA contacted as part of this undertaking are included in the list of consulting parties enclosed as **Attachment C**. Other than the Eastern Band of Cherokee Indians, no other tribes have identified historic properties or TCPs in response to the FAA's March, and August 2021, and February 2022 Section 106 consultation letters.

Assessment of Effects

The undertaking could have an effect on a historic property if it alters the characteristics that qualify the property for eligibility for listing or inclusion in the NRHP. The characteristics of the historic properties within the APE that qualify them for inclusion in the NRHP are described in **Attachment D**. Effects are considered adverse if they diminish the integrity of a property's elements that contribute to its significance. The undertaking does not include land acquisition, construction, or ground disturbance and will not result in physical effects to historic properties. FAA, in coordination with NPS, focused the assessment of effects on the potential for adverse effects from the introduction of audible or visual elements that could diminish the integrity of the property's significant historic features.

Assessment of Noise Effects

The undertaking would reduce noise effects to historic properties and therefore would not alter the characteristics of historic properties within the APE in comparison to existing conditions. To assess the potential for the introduction of audible elements, including changes in the character of aircraft noise, the FAA and NPS considered whether there would be a potential change in the annual number, daily frequency, routes or altitude of commercial air tours, as well as the type of aircraft used to conduct those tours.

The ATMP also requires commercial air tours to increase altitudes as compared to those flown under existing conditions. The increase in altitude, which ranges from 1,100 to 1,600 ft. (from a minimum of 1,000 ft. AGL under existing conditions) will reduce the maximum noise levels at sites directly below the commercial air tour routes. It should be noted that when the altitude of an aircraft is increased, the total area exposed to the noise from that aircraft may also increase depending on the surrounding terrain. Although the area exposed to noise might increase, this would not meaningfully affect the acoustic environment because of the attenuation of the noise from the higher altitude and transient nature of the impacts.

The proposed ATMP specifically alters four of the existing air tour routes to minimize overflights of historic properties. Specifically, routes were moved away from Appalachian Trail, Clingman's Dome, Elkmont Historic District, Voorheis Estate, Little Greenbrier School, and Walker Sisters Place.

The ATMP authorizes the use of the BHT-206-L1, BHT-206-L3, BHT-206-B, R-44-44, R-44-II, and R-44-RavenII helicopters, the same aircraft currently in use and any new or replacement aircraft must not exceed the noise level produced by the aircraft being replaced.

For purposes of assessing noise impacts from commercial air tours on the acoustic environment of the Park under the National Environmental Policy Act (NEPA), the FAA noise evaluation is based on Yearly³ Day Night Average Sound Level (Ldn or DNL); the cumulative noise energy exposure from aircraft over 24 hours. The DNL analysis indicates that the undertaking would not result in any noise exposure that would be “significant” or “reportable” under FAA’s policy for NEPA.⁴

As part of the ATMP noise analysis, the NPS provided supplemental metrics to further assess the impact of commercial air tours in quiet settings. **Attachment E** provides further information about the supplemental noise metrics and presents the noise contours (i.e., graphical illustration depicting noise exposure) from the modeling.

Attachment E also presents noise contours for the Time Above 35 dBA (the amount of time in minutes that aircraft sound levels are above 35 dBA) and Time Above 52 dBA. Noise related to commercial air tours is modeled to be greater than 35 dBA for less than 35 minutes a day within the Park and greater than 52 dBA for less than 5 minutes a day within the Park. The Gatlinburg Inn is situated just south of the location of the greatest duration of noise. Because noise is modeled using conservative assumptions (see **Attachment E**) and implementing the ATMP would result in limiting the number of flights and using the same aircraft to fly at higher altitudes along routes that have been adjusted away from the location of historic properties noise effects are anticipated to decrease under the ATMP.

Because the ATMP would potentially decrease noise levels on historic properties compared to the existing condition, it would not diminish the integrity of any historic property’s significant historic features.

Assessment of Visual Effects

The undertaking would alter the characteristics of historic properties within the APE because there would be an improvement from existing conditions. The level of commercial air tour activity under the ATMP is expected to improve or remain the same. The ATMP sets the number of commercial air tours consistent with the three-year average from 2017-2019 and implements limits on the number of flights and times of day during which commercial air tours are able to operate. These limits do not currently exist.

Recognizing that some types of historic properties may be affected by visual effects of commercial air tours, the FAA and NPS considered the potential for the introduction of visual elements that could alter the characteristics of a historic property that qualifies it for inclusion in the NRHP. Aircraft are transitory elements in a scene and visual impacts tend to be relatively short. The short duration and low number of flights make it unlikely a historic property would experience a visual effect from the undertaking. One’s perspective of or viewshed from a historic property is often drawn to the horizon and aircraft at higher altitudes are less likely to be noticed. Aircraft at lower altitudes may attract visual attention but are also more likely to be screened by vegetation.

³ Yearly conditions are represented as the Average Annual Day (AAD)

⁴ Under FAA policy, an increase in the Day-Night Average Sound Level (DNL) of 1.5 dBA or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dBA noise exposure level, or that will be exposed at or above the DNL 65 dBA level due to a DNL 1.5 dBA or greater increase, is significant. FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, Exhibit 4-1. Noise increases are “reportable” if the DNL increases by 5 dB or more within areas exposed to DNL 45-60 dB, or by 3 dB or more within areas exposed to DNL 60-65 dB. FAA Order 1050.1F, Appendix B, section B-1.4.

The FAA and NPS also considered the experience of tribal members who may be conducting ceremonies or practices that could involve looking toward the sky. The ATMP includes a provision for the NPS to establish temporary no-fly periods for special events such as tribal ceremonies or other similar events with a minimum of one week notice to the operator. This, along with the requirements for the operators to fly designated routes, represents an improvement over existing conditions where no such provision exists.

Under existing conditions, commercial air tours at the Park are generally flown on six different routes, though they are not required to fly on any particular route. The Appalachian National Scenic Trail is a historic property within the APE significant for its views, among other factors. Under the ATMP, existing commercial air tour routes would be modified away from the Appalachian National Scenic Trail to ensure they do not fly within ½ mile of the trail. The ATMP would prohibit commercial air tours within ½ mile of the trail. This prohibition helps preserve the scenic values of the trail that contribute to its historical significance. Further, the two routes that fly nearest to the Appalachian National Scenic Trail would be limited under the ATMP to a maximum of 43 tours annually, limits that do not exist under the existing condition (IOA).

The ATMP limits the annual number of commercial air tours to 946 and includes designated routes that modify the current routes flown by the operators over the Park to avoid potential visual and audible effects to historic properties. Therefore, visual effects to historic properties are expected to decrease compared to impacts currently occurring because the number of authorized flights under the ATMP will be the same or less than the average number of flights from 2017-2019, and four of the six routes would be relocated in order to limit audible and visual effects to historic properties. As a result of provisions in the ATMP such as the increase in altitude of flights, adjustment of route locations, and limits to the daily frequency and time of day flights can operate, the undertaking would not introduce visual elements that would alter the characteristics of any historic property that qualifies it for inclusion in the NRHP.

Finding of No Adverse Effect Criteria

To support a Finding of No Adverse Effect, an undertaking must not meet any of the criteria set forth in the Advisory Council on Historic Preservation's Section 106 regulations at 36 CFR 800.5(a). This section demonstrates the undertaking does not meet those criteria. The undertaking would not have any physical impact on any property. The undertaking is located in the airspace above historic properties and would not result in any alteration or physical modifications to these resources. The undertaking would not remove any property from its location. The undertaking would not change the character of any property's use or any physical features in any historic property's setting. As discussed above, the undertaking would not introduce any audible or visual elements that would diminish the integrity of the significant historical features of any historic properties in the APE. The undertaking would not cause any property to be neglected, sold, or transferred.

Proposed Finding and Request for Review and Concurrence

FAA and NPS approval of the undertaking would not alter the characteristics of any historic properties located within the APE as the undertaking would represent a reduction in audible and visual effects on historic properties when compared to existing conditions. Based on the above analysis, the FAA and NPS propose a finding of no adverse effect on historic properties. We request that you review the information and respond whether you concur with the proposed finding within thirty days of receiving this letter.

Should you have any questions regarding any of the above, please contact Judith Walker at 202-267-4185 or Judith.Walker@faa.gov and copy the ATMP team at ATMPTeam@dot.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Judith Walker', with a long horizontal flourish extending to the right.

Judith Walker
Federal Preservation Officer
Senior Environmental Policy Analyst
Environmental Policy Division (AEE-400)
Federal Aviation Administration

CC: Kelley Reid, Historic Preservation Specialist

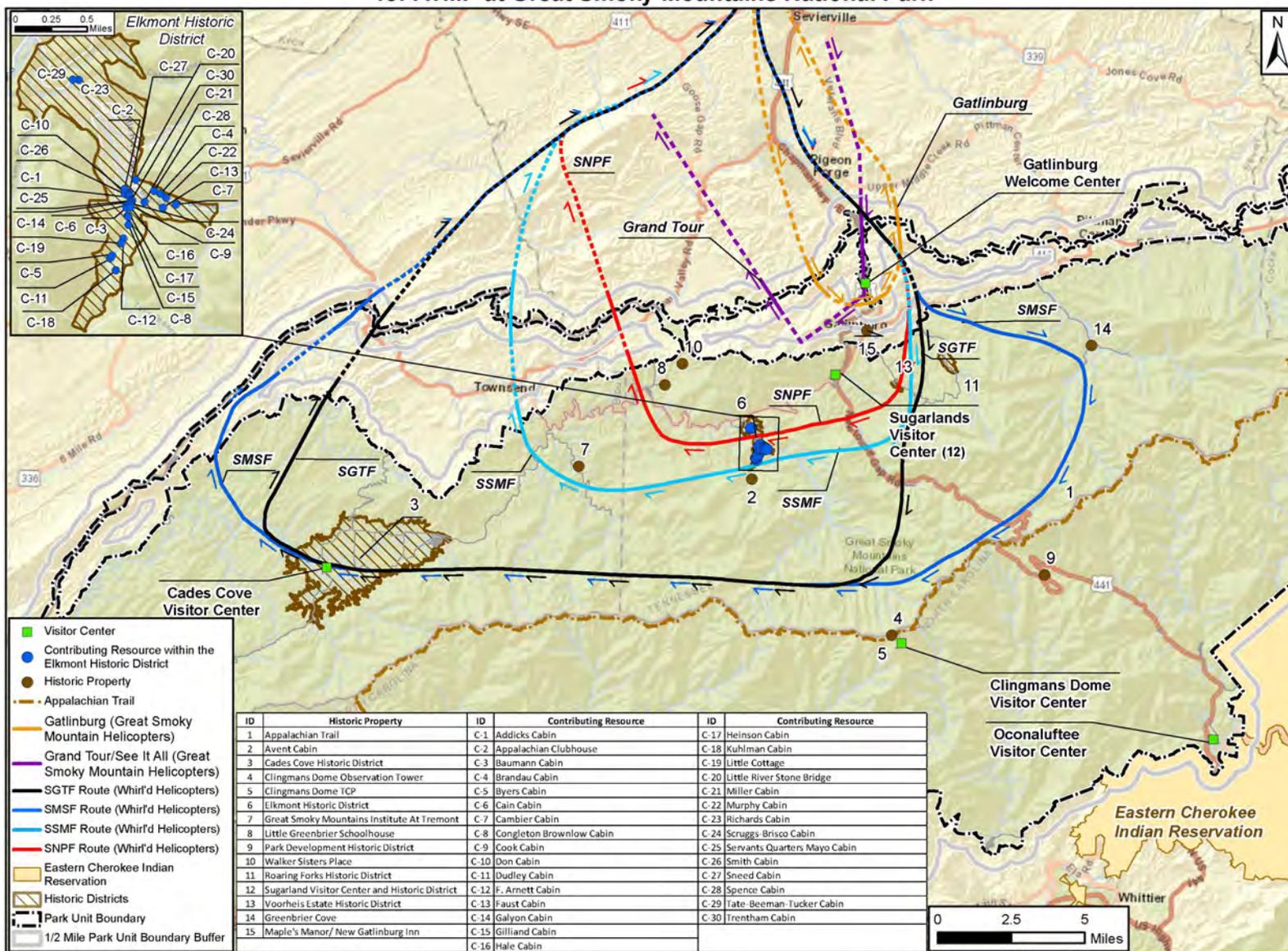
Attachments

- A. Map of Existing Commercial Air Tour Routes
- B. APE Map including Proposed Commercial Air Tour Routes
- C. List of Consulting Parties
- D. List of Historic Properties in the APE and Description of Historic Characteristics
- E. Methodology of NEPA Technical Noise Analysis

ATTACHMENT A

**Map of Existing Commercial Air Tour Routes
Including Identified Historic Properties**

Map of Existing Air Tour Routes with Location of Identified Historic Properties for ATMP at Great Smoky Mountains National Park

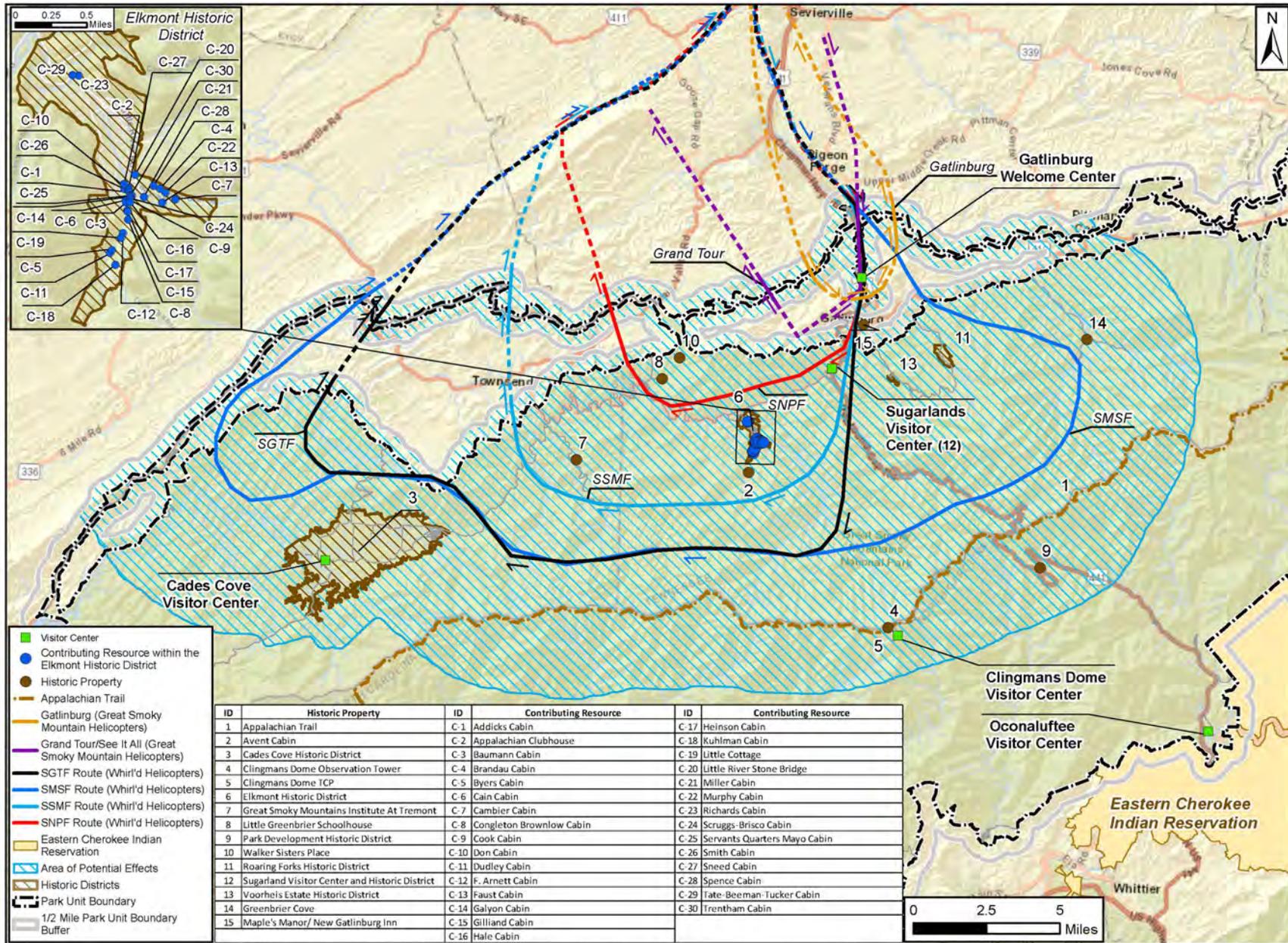


ATTACHMENT B

Area of Potential Effects Map

Including Commercial Air Tour Routes under the ATMP

Area of Potential Effects Map for ATMP at Great Smoky Mountains National Park (Proposed Air Tour Routes)



ATTACHMENT C

List of Additional Consulting Parties Invited to Participate in Section 106 Consultation

A Walk In the Woods
Alabama-Coushatta Tribe of Texas ¹
Blount County
Catawba Indian Nation
Cherokee Nation
Cherokee National Forest
Chickasaw Nation ²
Coushatta Tribe of Louisiana ¹
Eastern Band of Cherokee Indians
Gatlinburg
Great Smoky Mountain Helicopters Inc. (Smoky Mountain Helicopters, M Helicopters of TN, Delta Helicopters, Cherokee Helicopters)
Muscogee Creek Nation
Nantahala National Forest
National Trust for Historic Preservation
North Carolina State Historic Preservation Office
Pigeon Forge
Pisgah National Forest
Sevier County
Tennessee State Historic Preservation Office
Tennessee Valley Authority/Fontana Dam
United Keetoowah Band of Cherokee Indians in Oklahoma ¹
Whirl'd Helicopters, Inc. (formerly Rambo Helicopter Charter, Inc. dba Scenic Helicopter Tours)

¹Tribe received follow up email and/or phone calls in December 2021 and January 2022.

²Tribe opted out of Section 106 consultation

ATTACHMENT D

List of Historic Properties in the APE

Property Name	Property Type	NRHP Status	Summary of Character Defining Elements
Appalachian Trail	Landscape	Eligible	The Appalachian Trail is a significant cultural landscape that reveals the history of human use and settlement along the Appalachian Mountain range and the resulting distinct regional traditions. Visitors to the trail have the unique opportunity to interact with the communities and resources representing diverse eras in U.S. history and pre-history. The trail provides a direct physical link to Great Smoky Mountains National Park. Visitors are afforded sweeping views of vast landscapes extending beyond the trail corridor.
Avent Cabin	Building	Listed	Avent Cabin is listed in the NRHP under Criterion B for its association with Mayna Treanor Avent and Criterion C as a representative example of log structure built during the mid-nineteenth century. The cabin is the last surviving example of this property type on the banks of Jakes Creek. Significant characteristics of the building include its single-pen design and use of logs as a construction material.
Cades Cove Historic District	Historic District	Listed	Cades Cove Historic District is significant as an intact example of a community that valued traditional agricultural practices. The buildings within the district reflect the materials, skills, and needs of the people that first inhabited them. Buildings are situated close to the fields of the farms, water, and other resources needed to support life in a frontier area. Though many buildings have been relocated or reconstructed, great care has been taken to preserve the architectural form, materials, and appearance.

Property Name	Property Type	NRHP Status	Summary of Character Defining Elements
Clingman's Dome	Traditional Cultural Property	Eligible	Identified by Eastern Band of Cherokee Indians as significant.
Clingman's Dome Observation Tower	Structure	Listed	Clingman's Dome Observation Tower was constructed in 1959. It is a prominent example of National Park Service Modern architecture, which broke away from the long-standing "rustic" style of the National Park Service. It is additionally significant as a representation of the National Park Service's Mission 66 program.
Elkmont Historic District	Historic District	Listed	The Elkmont Historic District is listed in the NRHP under Criteria A and C for its architectural and historical significance. The district is significant as the only remaining collection of early 20 th century resort cabins retaining integrity in the Appalachian Mountains of Tennessee. It is also significant as representative of rustic or vernacular architecture of the early 20 th century. The historic district contains 32 contributing properties.
Great Smoky Mountains Institute	Building	Eligible	The Great Smoky Mountains Institute was constructed on the site of a logging camp. It was established in the early 1960s as a Job Corps Center and between 1969 and 1979 operated as the Tremont Environmental Education Center in a partnership between Maryville College and the National Park Service. The buildings are representative of the National Park Service's Mission 66 program.
Little Greenbrier Schoolhouse	Building	Listed	Little Greenbrier School House is significant as an example of a late 19 th century schoolhouse and church in rural Tennessee. It is additionally significant as an example of architecture associated with the practice of Primitive Baptism.
Park Development Historic District	Historic District	Eligible	The Park Development Historic District is eligible under Criteria A and C. It encompasses the original automobile circulation system and major developed areas accessed in Great Smoky Mountains National Park during the period of significance from 1933 to 1942.

Property Name	Property Type	NRHP Status	Summary of Character Defining Elements
Walker Sisters' Place	Building Complex	Listed	The Walker Sisters' Place is significant as a late-period example of a traditional homestead within Great Smoky Mountains National Park. The agricultural complex features a variety of nineteenth century agricultural outbuildings that remained in continuous use through the middle of the twentieth century.
Roaring Forks Historic District	Historic District	Listed	The valley of the Roaring Fork is significant for its collection of late 19 th and early 20 th century agricultural buildings set within the extremely narrow, rock-strewn hollow.
Sugarlands	Historic District	Eligible	The Sugarlands is a valley in the north-central Great Smoky Mountains formerly home to a string of small Appalachian communities. The area was named by Euro-American settlers who made syrup from sugar maple trees found in the area.
Voorheis Estate	Cultural Landscape	Eligible	The Voorheis estate is a cultural landscape within the North District of Great Smoky Mountains National Park. The 38-acre site encompasses the former mountain retreat developed by Lois E. Voorheis between 1928 and 1944. The estate is an example of rustic style of architecture and landscape architecture which is evident in the form of structures, designed water features, and the intentional use of natural materials. Numerous flowers, shrubs, and trees were planted for ornamental color, visual character, and to outline walks with seasonal color.
Greenbrier Cove	Structure	Eligible	Identified by "A Walk in the Woods." The Greenbrier Area consists of significant historic resources that help share the story of early mountain settlements within the boundaries of the Park. The Greenbrier Area consists of numerous cemeteries, rock walls, chimneys, and a few preserved cabins and outbuildings.

Property Name	Property Type	NRHP Status	Summary of Character Defining Elements
Maples Manor/New Gatlinburg Inn	Building	Listed	Maples Manor/New Gatlinburg Inn is locally significant and eligible under Criterion C for architecture. The hotel experienced a variety of unsympathetic alterations during the late twentieth century, many of which have been removed or modified during more recent renovation projects.

ATTACHMENT E

Summary of Noise Technical Analysis from NEPA Review

There are numerous ways to measure the potential impacts from commercial air tours on the acoustic environment of a park, including intensity, duration, and spatial footprint of the noise. The metrics and acoustical terminology used for the ATMPs are shown in the table below.

Metric	Relevance and citation
Day-night average sound level, L_{dn} (or DNL)	<p>The logarithmic average of sound levels, in dBA, over a 24-hour day, DNL takes into account the increased sensitivity to noise at night by including a ten dB penalty between 10 p.m. and 7 a.m. local time.</p> <p>The FAA's indicators of significant impacts are for an action that would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe⁵.</p>
Equivalent sound level, $L_{Aeq, 12\text{ hr}}$	<p>The logarithmic average of commercial air tour sound levels, in dBA, over a 12-hour day. The selected 12-hour period is 7 a.m. to 7 p.m. to represent typical daytime commercial air tour operating hours.</p> <p>Note: Both $L_{Aeq, 12\text{ hr}}$ and L_{dn} characterize:</p> <ul style="list-style-type: none"> • Increases in both the loudness and duration of noise events • The number of noise events during specific time period (12 hours for $L_{Aeq, 12\text{ hr}}$ and 24-hours for L_{dn}) <p>However, DNL takes into account the increased sensitivity to noise at night by including a ten dB penalty between 10 p.m. and 7 a.m. local time. If there are no nighttime events, $L_{Aeq, 12\text{ hr}}$ will be three dB higher than DNL.</p>
Time Above 35 dBA ⁶	<p>The amount of time (in minutes) that aircraft sound levels are above a given threshold (i.e., 35 dBA)</p>

⁵ FAA Order 1050.1F, Exhibit 4-1

⁶ dBA (A-weighted decibels): Sound is measured on a logarithmic scale relative to the reference sound pressure for atmospheric sources, 20 μPa . The logarithmic scale is a useful way to express the wide range of sound pressures perceived by the human ear. Sound levels are reported in units of decibels (dB) (ANSI S1.1-1994, American National Standard Acoustical Terminology). A-weighting is applied to sound levels in order to account for the

	In quiet settings, outdoor sound levels exceeding 35 dB degrade experience in outdoor performance venues (ANSI 12.9-2007, Quantities And Procedures For Description And Measurement Of Environmental Sound – Part 5: Sound Level Descriptors For Determination Of Compatible Land Use); Blood pressure increases in sleeping humans (Haralabidis et al., 2008); maximum background noise level inside classrooms (ANSI/ASA S12.60/Part 1-2010, Acoustical Performance Criteria, Design Requirements, And Guidelines For Schools, Part 1: Permanent Schools).
Time Above 52 dBA	The amount of time (in minutes) that aircraft sound levels are above a given threshold (i.e., 52 dBA) This metric represents the level at which one may reasonably expect interference with Park interpretive programs. At this background sound level (52 dB), normal voice communication at five meters (two people five meters apart), or a raised voice to an audience at ten meters would result in 95% sentence intelligibility. ⁷
Maximum sound level, L _{max}	The loudest sound level, in dBA, generated by the loudest event; it is event-based and is independent of the number of operations. L _{max} does not provide any context of frequency, duration, or timing of exposure.

For aviation noise analyses under the National Environmental Policy Act (NEPA), the FAA determines the cumulative noise energy exposure of individuals resulting from aviation activities in terms of an Average Annual Day (AAD). However, because ATMP operations in the park occur at low annual operational levels and are highly seasonal in nature it was determined that a peak day representation of the operations would more adequately allow for disclosure of any potential impacts. A peak day has therefore been used as a conservative representation of assessment of AAD conditions required by FAA policy. The 90th percentile day was identified for representation of a peak day and derived from the busiest year of commercial air tour activity from 2017-2019, based on the total number of commercial air tour operations and total flight miles over the Park. It was then further assessed for the type of aircraft and route flown to determine if it is a reasonable representation of the commercial air tour activity at the Park.

For the Park, the 90th percentile day was identified as the following:

- Red Route (SNPF) – three flights, BHT-206-L1 aircraft
- Light Blue Route (SSMF) – one flight, BHT-206-L1 aircraft
- Blue Route (SMSF) – one flight, BHT-206-L1 aircraft
- Orange Route (Gatlinburg) – one flight, Bell 206-L aircraft
- Purple Route (Grand Tour/See It All) – one flight, Bell 206-L aircraft

sensitivity of the human ear (ANSI S1.42-2001, Design Response of Weighting Networks for Acoustical Measurements). To approximate human hearing sensitivity, A-weighting discounts sounds below 1 kHz and above 6 kHz.

⁷ Environmental Protection Agency. Information on Levels of Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety, March 1974.

Noise contours for the acoustic indicators were developed using the Federal Aviation Administration's Aviation Environmental Design Tool (AEDT) version 3d and are provided below. A noise contour presents a graphical illustration or “footprint” of the area potentially affected by the noise.

- Time above 35 dBA (minutes) – see Figure 1
- Time above 52 dBA (minutes) – see Figure 2
- Equivalent sound level, $L_{Aeq, 12hr}$ – see Figures 3 and 4
 - Note: Contours are not presented for L_{dn} (or DNL) as it is arithmetically three dBA lower than $L_{Aeq, 12hr}$ if there are no nighttime events, which is the case for the ATMP modeled at the Park.
- Maximum sound level or L_{max} – see Figure 5

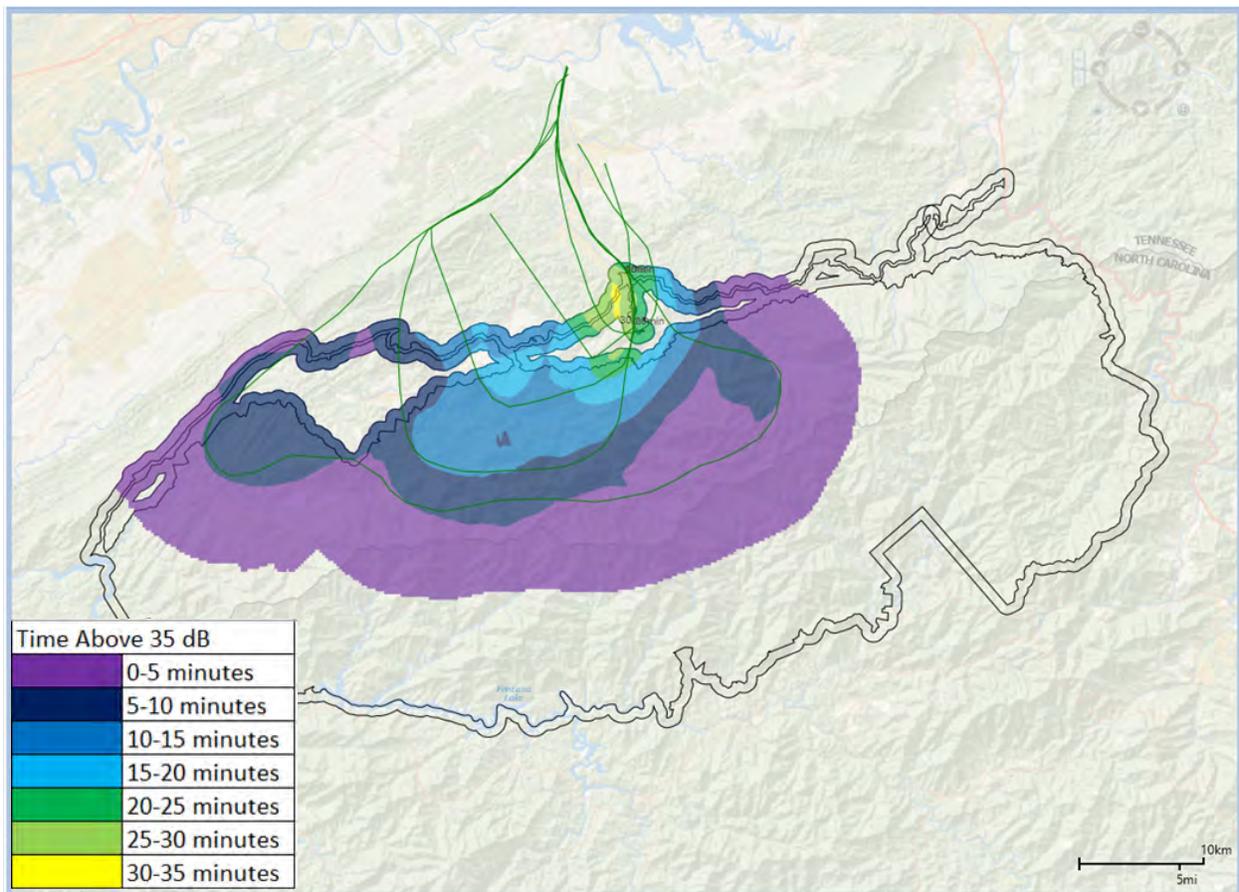


Figure 1. Noise contour results for Time Above 35 dBA

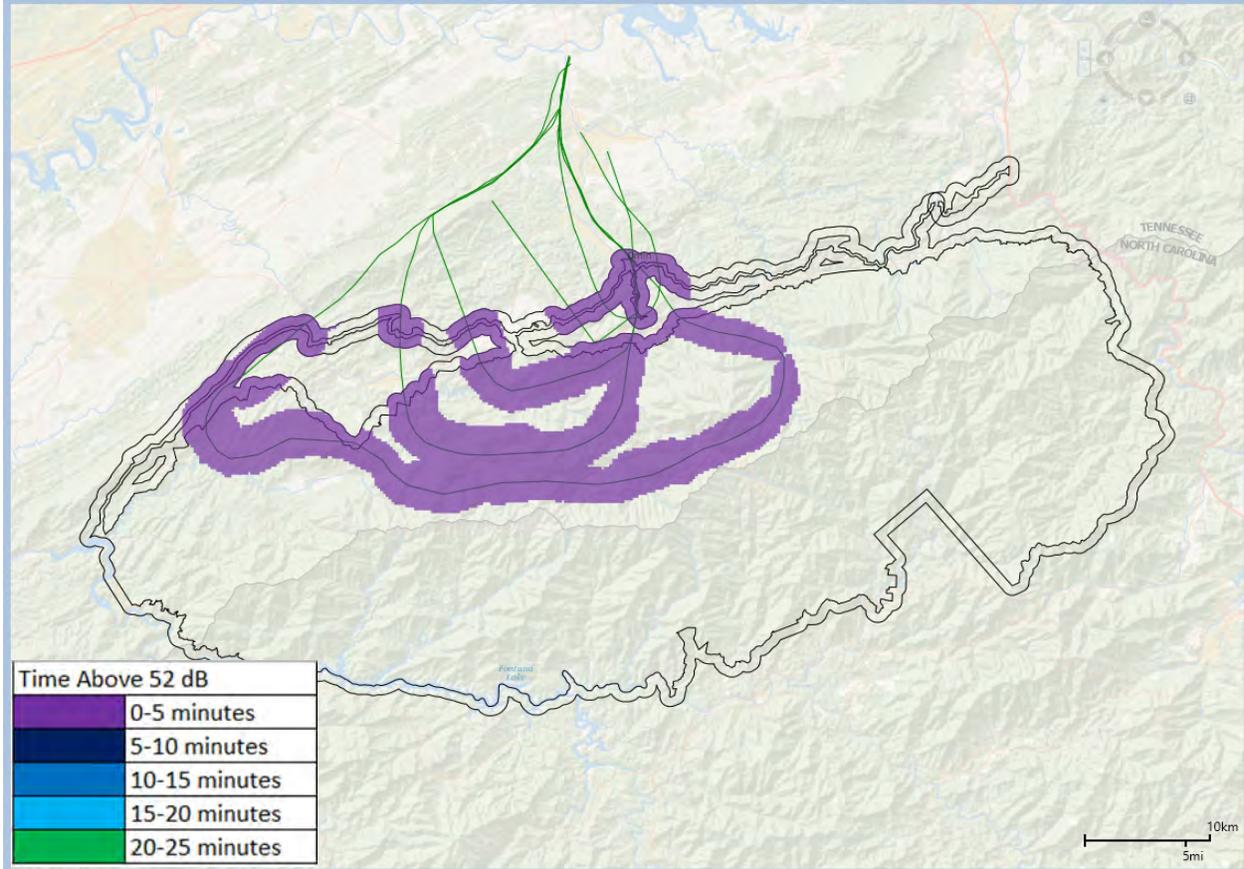


Figure 2. Noise contour results for Time Above 52 dBA

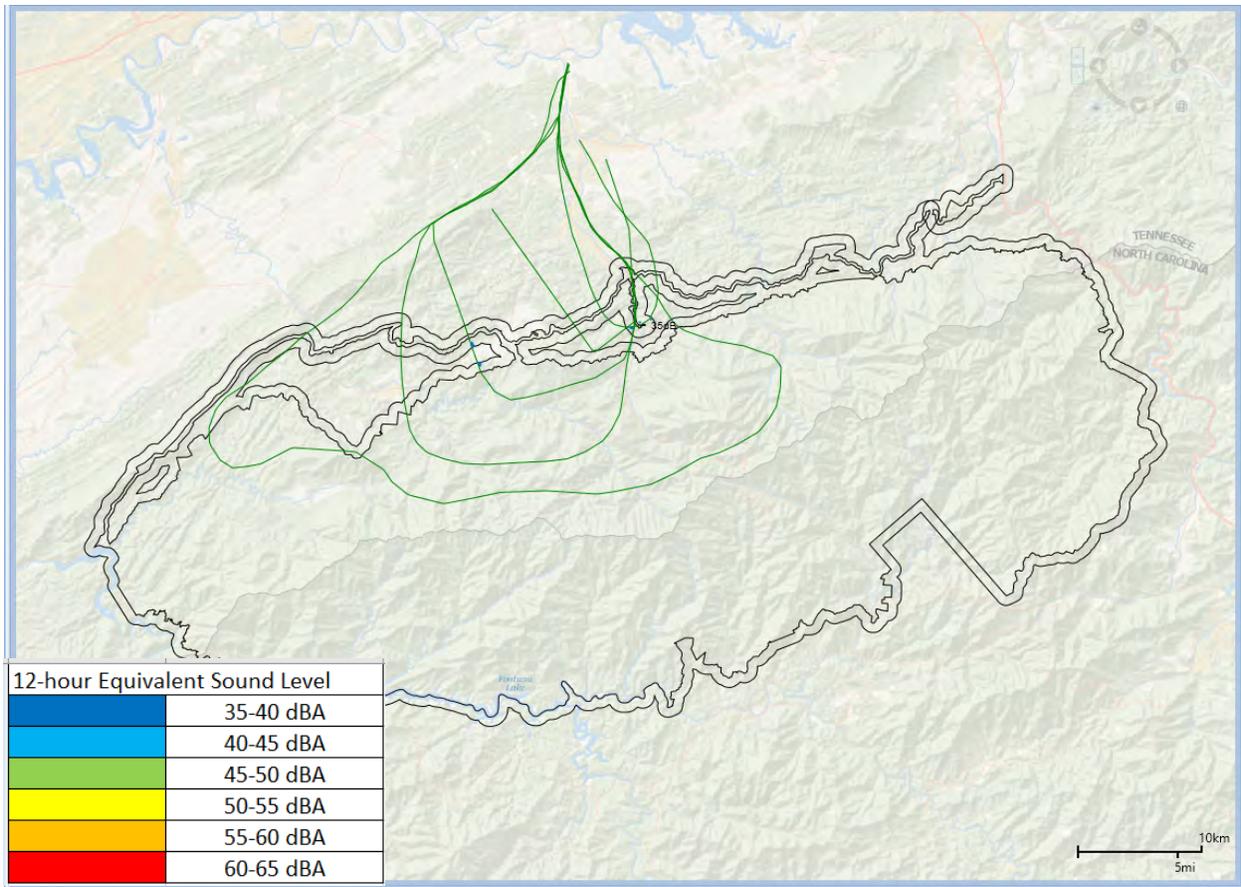


Figure 3. Noise contour results for $L_{Aeq, 12hr}$

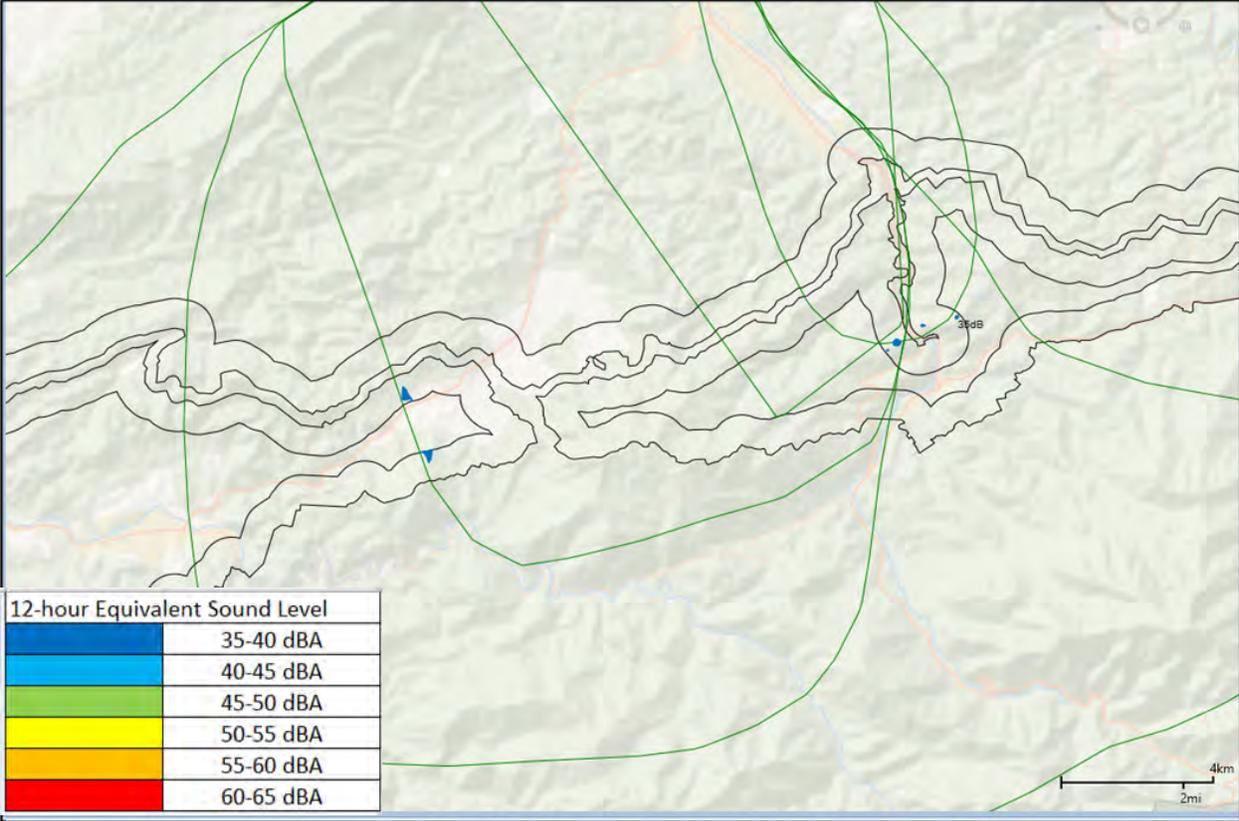


Figure 4. Zoomed in noise contour results for $L_{Aeq,12hr}$

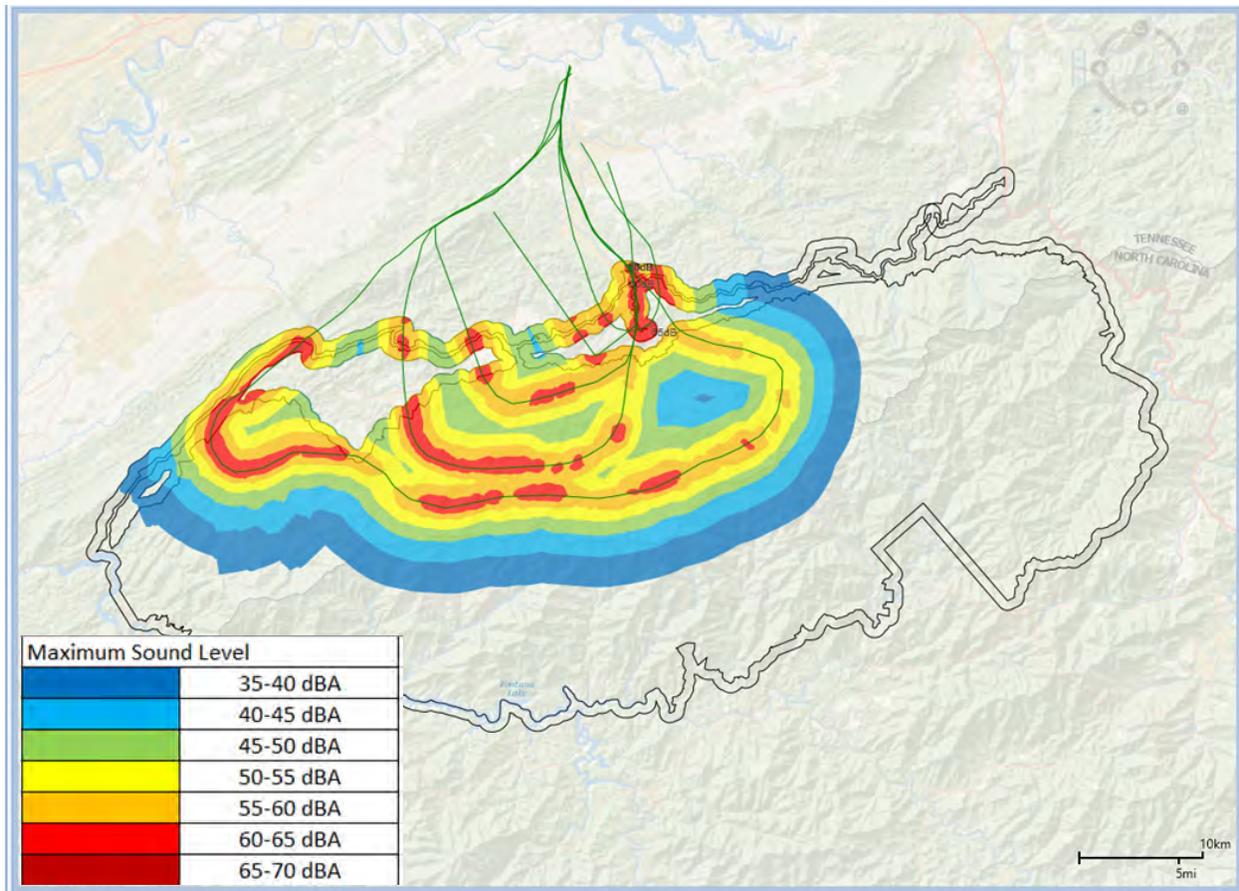


Figure 5. Noise contour results for L_{max}



**North Carolina Department of Natural and Cultural Resources
State Historic Preservation Office**

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.

May 4, 2022

Judith Walker
Federal Aviation Administration
1781 East Fir Avenue, Suite 203
Fresno, CA 93720

Judith.Walker@faa.gov

Re: Development of an Air Tour Management Plan for Great Smoky Mountains National Park,
Multiple Counties, ER 21-0791

Dear Ms. Walker:

Thank you for your letter of May 3, 2022, regarding the above-referenced undertaking. We have reviewed the submittal and offer the following comments.

We concur with the Federal Aviation Administration and the National Park Service's finding that no historic properties in North Carolina will be affected by the proposed undertaking/plan.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

A handwritten signature in blue ink that reads "Renee Gledhill-Earley".

for Ramona Bartos, Deputy
State Historic Preservation Officer

From: [TN Help](#)
To: [Walker, Judith <FAA>](#)
Cc: [ATMPTeam](#)
Subject: GSMNP, Air Tour Management Plan - Project # SHPO0001033
Date: Thursday, May 19, 2022 2:17:58 PM
Attachments: [State Seal for TDEC.pngx](#)
[patricksignature.pngx](#)
[TN SHPO READ ME1.pdf](#)

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.



TENNESSEE HISTORICAL COMMISSION
STATE HISTORIC PRESERVATION OFFICE
2941 LEBANON PIKE
NASHVILLE, TENNESSEE 37243-0442
OFFICE: (615) 532-1550
www.tnhistoricalcommission.org

2022-05-16 13:35:03 CDT

Ms. Judith Walker
Federal Aviation Administration
Judith.Walker@faa.gov

RE: Federal Aviation Administration (FAA), GSMNP, Air Tour Management Plan,
Project#: SHPO0001033, Blount and Sevier Counties, TN

Dear Ms. Walker:

Pursuant to your request, this office has reviewed documentation concerning the above-referenced undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicants for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739).

Setting is an integral part of the integrity for many of the resources within the Great Smoky Mountains National Park that are eligible or listed in the National Register of Historic Places. The presence of both visual and auditory disturbance from helicopters diminishes the integrity of these resources. We recognize and appreciate that the Air Tour Management Plan is being developed to minimize these visual and auditory effects from air tours that have been operated over the Great Smoky

Mountains National Park for over 20 years and that never went through compliance. However, as air tours will still be operated over the park under this plan, the adverse effect is still present. The minimization presented in the Air Tour Management Plan has been thoughtfully planned out and should be laid out in a Memorandum of Agreement along with any mitigation for the continuance of the air tours over the park.

Considering available information, we maintain that the project as currently proposed will adversely affect multiple resources within the Great Smoky Mountains National Park that are listed in or eligible for listing in the National Register of Historic Places. Per 36 CFR 800.5 (c)(2)(i), you may contact the Advisory Council on Historic Preservation for their assistance in resolving this dispute. Include the Project # if you need to submit any additional information regarding this undertaking. Questions and comments may be directed to Kelley Reid, who drafted this response, at Kelley.Reid@tn.gov, +16157701099. We appreciate your cooperation.

Sincerely,

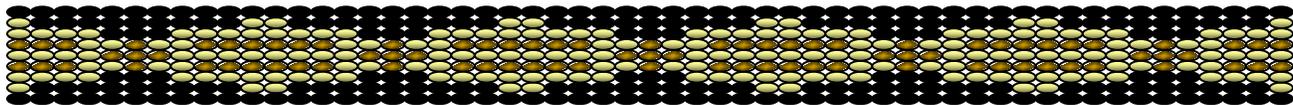
A handwritten signature in black ink that reads "E. Patrick McIntyre, Jr." in a cursive script.

E. Patrick McIntyre, Jr.
Executive Director and
State Historic Preservation Officer

Ref:MSG6535626_piYqvHHgUKIFowgqdShF

Catawba Indian Nation
Tribal Historic Preservation Office
1536 Tom Steven Road
Rock Hill, South Carolina 29730

Office 803-328-2427



June 8, 2022

Attention: Judith Walker
Federal Aviation Administration

Re. THPO #	TCNS #	Project Description
2022-40-5		Development of an Air Tour Management Plan for Great Smokey Mountains National Park

Dear Ms. Walker,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail Caitlin.Rogers@catawba.com.

Sincerely,

Wenonah G. Haire
Tribal Historic Preservation Officer

File Code: 2360
Date: May 23, 2022

Judith Walker
Federal Preservation Officer
Senior Environmental Policy Analyst
Environmental Policy Division (AEE-400)
Federal Aviation Administration

Dear Ms. Walker:

In response to your letter of May 3, 2022, the Area of Potential Effect for the Great Smoky Mountains National Park air tour plan does not appear to encompass any National Forest System lands of the Cherokee National Forest. However, we do manage sections of the Appalachian National Scenic Trail located in the Cherokee National Forest north of Great Smoky Mountains National Park. We do appreciate the modification of existing air tour routes away from the trail to benefit the overall trail setting and visitor experience. The Cherokee National Forest concurs with the proposed finding of “no adverse effect” on historic properties.

Thank you for the opportunity to review and comment. If you have any questions or need additional information, contact Danielle Shelton, Forest Heritage Program Manager, at stephanie.shelton@usda.gov.

Sincerely,



MICHAEL A WRIGHT
Acting Forest Supervisor

cc: Judith.Walker@faa.gov, Doug Byerly, Danielle Shelton





POARCH BAND OF CREEK INDIANS

5811 Jack Springs Road • Atmore, Alabama 36502

Tribal Offices: (251) 368-9136 • Administrative Fax: (251) 368-4502

www.poarchcreekindians-nsn.gov

July 12, 2022

Ms. Judith Walker
Federal Preservation Officer
Office of Environmental and Energy AEE-400
800 Independence Ave. Southwest
Washington, DC 20591

Re: 2022-07-0006: Section 106 Consultation: Air Tour Management Plan for the Great Smokey Mountains National Park

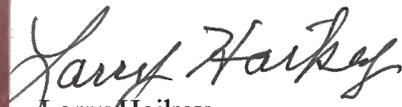
Dear Ms. Walker,

The Poarch Band of Creek Indians, Tribal Historic Preservation Office has received and reviewed the documentation submitted for the referenced project in Blount County, Tennessee. Based upon the information submitted it is the opinion of this office that the project has no potential to cause effects on historic properties. No further National Historic Preservation Act, Section 106 consultation is necessary.

Should implementation of the project result in an inadvertent discovery of any material remains of past human life or activities of archaeological interest, such as chipped stone tools, pottery, bone, historic crockery, glass, metal items or building materials, the project should be halted until evaluation and consultation is complete.

Thank you for the opportunity to comment on this project. We look forward to working with you in the future. Should further correspondence pertaining to the project be necessary, please reference the above file number when responding. If you have any questions, please do not hesitate to call 251-368-9136 extension 2072.

Sincerely,



Larry Haikey
Tribal Historic Preservation Officer



United States Department of Transportation
FEDERAL AVIATION ADMINISTRATION
Office of Policy, International Affairs & Environment
Office of Environment and Energy

NATIONAL PARKS AIR TOUR MANAGEMENT PROGRAM

September 6, 2022

Re: Request for Review from the Advisory Council on Historic Preservation Pursuant to 36 CFR §800.5(c)(2) of the Federal Aviation Administration's Proposed Finding of No Adverse Effect on Historic Properties from the Implementation of an Air Tour Management Plan for Great Smoky Mountains National Park

Ms. Jaime Loichinger
Assistant Director
Office of Federal Agency Programs
Advisory Council on Historic Preservation
401 F Street, Ste. 308
Washington, DC 20001

Dear Ms. Loichinger:

The Federal Aviation Administration (FAA), as the lead Federal agency and in coordination with the National Park Service (NPS), respectfully requests that the Advisory Council on Historic Preservation (ACHP) review the FAA's proposed finding of no adverse effect on historic properties from the implementation of an Air Tour Management Plan (ATMP) for Great Smoky Mountains National Park (Park) made under Section 106 of the National Historic Preservation Act. The FAA submits this request in accordance with 36 CFR §800.5(c)(2)(i) in response to the Tennessee State Historic Preservation Office's (SHPO)'s objection to the proposed finding. The FAA is concurrently notifying all consulting parties about this request and will make the request documentation available to the public at:

https://www.faa.gov/about/office_org/headquarters_offices/ara/programs/air_tour_management_plan.

Enclosed is the correspondence sent to, and received from, consulting parties throughout the consultation process (see Exhibits 1 through 6) as well as supplemental graphics to aid your review (Exhibit 7). In particular, Exhibit 5 contains the agency's May 3, 2022 finding of effect letter to the Tennessee SHPO, which meets the requirements of 36 CFR §800.11(e). The finding of effect letter describes the undertaking, the Area of Potential Effect (APE), a description of steps taken to identify historic properties, a description of affected historic properties in the APE and the characteristics that qualify them for the National Register of Historic Places, and an explanation of why the criteria of adverse effect do not apply to this undertaking. It also describes the Section 106 consultation process and public involvement completed for this undertaking.

Included in Exhibits 5 and 6 are the responses to FAA's May 3, 2022 letter received from consulting parties. While the FAA received concurrence with the proposed finding of no adverse effect from the North Carolina SHPO, the Cherokee National Forest, and the Tribal Historic Preservation Officers for the Catawba Tribe and the Poarch Band of Creek Indians; the Tennessee SHPO, in its May 19, 2022 correspondence, disagreed with the FAA's determination.

This letter includes background about the National Parks Air Tour Management Act (NPATMA), describes the undertaking and the history of air tours over the Park, and addresses the elements of the Tennessee SHPO's objection and the FAA's response.

The National Parks Air Tour Management Act

NPATMA requires that all commercial air tour operators conducting or intending to conduct a commercial air tour operation over a unit of the National Park System apply to the FAA for authority to undertake such activity. 49 U.S.C. §40128(a)(2)(A). As amended by the FAA Modernization and Reform Act of 2012, NPATMA further requires the FAA, in cooperation with the NPS, to establish an ATMP or voluntary agreement for each park for which applications were made, unless a park has been exempted from this requirement. *Id.* §40128(b)(1)(A), (b)(7). The objective of an ATMP is to "develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural and cultural resources, visitor experiences, and tribal lands." *Id.* §40128(b)(1)(B).

FAA regulations define a commercial air tour as:

[A]ny flight, conducted for compensation or hire in a powered aircraft where a purpose of the flight is sightseeing over a national park, within ½ mile outside the boundary of any national park, or over tribal lands during which the aircraft flies:

- (i) Below 5,000 feet above ground level (except for the purpose of takeoff or landing, or as necessary for the safe operation of an aircraft as determined under the rules and regulations of the Federal Aviation Administration requiring the pilot-in-command to take action to ensure the safe operation of the aircraft); [or]
- (ii) Less than 1 mile laterally from any geographic feature within the park (unless more than ½ mile outside the boundary). . . .

14 CFR §136.33(d).

Because Congress anticipated that the development of ATMPs would take time, it provided in NPATMA that prior to the establishment of an ATMP, the FAA "shall grant interim operating authority" to existing air tour operators that apply for prospective operating authority. 49 U.S.C. §40128(c)(1) (emphasis added). NPATMA required that interim operating authority was the greater of the number of commercial air tour flights over the park during the 12-month period, or the average number of commercial air tour flights within the 36-month period, prior to the enactment of NPATMA. *Id.* §40128(c)(2).

The History of Air Tours at the Park

Commercial air tours have been operating over the Park well before NPATMA was enacted in 2000. Prior to NPATMA, air tour operators were subject only to FAA's general safety regulations, which applied to the operators of various types of aircraft, including those used to conduct commercial air tour

operations whether inside or outside of national parks. At that time there were no limits on the number of air tours that could be conducted per year and no designated routes or altitudes for flights.

Since 2005, most commercial air tours over national parks, including Great Smoky Mountains National Park, have been conducted pursuant to interim operating authority issued by the FAA in accordance with NPATMA. *See* 70 Fed. Reg. 36,456 (June 23, 2005). Because the FAA's grant of interim operating authority was a non-discretionary agency act mandated by Congress, compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act was not required. *See Sugarloaf Citizens Ass'n v. FERC*, 959 F.2d 508, 513 (4th Cir. 1992) (holding that where an agency did not have the discretion to deny certification to a facility that met certain criteria, compliance with NEPA and Section 106 was not required); *Sac & Fox Nation of Missouri v. Norton*, 240 F.3d 1250, 1263 (10th Cir. 2001) (compliance with Section 106 and NEPA is not required for nondiscretionary actions).

Currently, two operators hold interim operating authority to conduct a total of 1,920 air tours each year over the Park and over Eastern Cherokee tribal lands within ½ mile of the Park's boundary. The airspace within the ATMP planning area is uncontrolled airspace, and air tour operators currently fly under visual flight rules (VFR). VFR is based on the principle of "see and avoid" and does not require specific routes or altitudes. 14 CFR § 91.155. Interim operating authority does not itself include any operating parameters (e.g., routes, altitudes, time of day, etc.) for air tours other than an upper limit of the total number of air tours operators may conduct each year. Attachment A to the FAA's finding of effect letter (Exhibit 5 to this letter) depicts the routes currently flown by the two operators, however under interim operating authority they are not restricted to any route when they conduct commercial air tours and their routes could change without notice to the FAA or the NPS. Both operators currently fly between 1,000 feet (ft.) and 1,500 ft. above ground level (AGL) on all routes while over the Park or outside the Park but within ½ mile of its boundary although they are currently not required to fly at any minimum altitude.

In accordance with NPATMA and a plan approved by the U.S. Court of Appeals for the District of Columbia Circuit (Court), the FAA and the NPS are developing an ATMP for the Park. The Court retained jurisdiction to approve the agencies' plan and monitor their progress. Thus, the planning process to implement an ATMP for the Park has proceeded, and remains, under Court supervision.

The Undertaking

The FAA has determined that the development and implementation of an ATMP for the Park is an undertaking under the National Historic Preservation Act. The ATMP for the Park includes the following:

- Authorizes up to 946 total commercial air tours per year and includes operator-specific restrictions on the number of commercial air tours that may be conducted on an annual and daily basis;
- Sets a minimum altitude of 2,600 ft. above ground level (AGL) with limited exceptions for takeoff, landing, and emergency situations;
- Designates operator-specific routes and sets an annual limit of tours that may occur on certain routes. Routes assigned as part of this ATMP are intended to protect visitor experience, natural and cultural resources, and acoustic resources of the Park by aligning flight routes with existing transportation corridors and avoiding noise-sensitive wildlife habitat and historic properties;
- Restricts the number of commercial air tours operators may conduct each day;
- Authorizes specific types of aircraft to be used on the tours and specifies that any new or replacement aircraft must not be noisier than the authorized aircraft;

- Provides that commercial air tours may not be conducted less than two hours after sunrise or later than two hours before sunset unless the agencies have approved the operator's eligibility for the quiet technology incentive, in which case they may operate tours beginning at sunrise or ending at sunset;
- Provides for the establishment of no-fly periods by the NPS for Park management or special events, including tribal events, with one-month advance notice to the operator;
- Provides for operator training and education;
- Provides for annual meetings between the FAA Flight Standards District Office, Park staff, and the operators;
- Requires operators to install and use flight monitoring technology on all authorized commercial air tours and to include flight monitoring data in their semi-annual reports to the agencies, along with the number of commercial air tours conducted;
- Includes safety requirements relating to in-flight communications;
- Allows for minor modifications to the ATMP through adaptive management as long as the environmental impacts of such changes have been analyzed previously;
- Outlines a process for amending the ATMP;
- Provides information regarding the process for operators to apply for operating authority as a new entrant; and
- Sets forth a general process for conducting competitive bidding for air tour allocations, where appropriate.

For further details related to the various elements of the ATMP for the Park, refer to the summary in the FAA's May 3, 2022 finding of effect letter (Exhibit 5).

In summary, the number of air tours authorized under the ATMP is less than half of those currently allowed under interim operating authority, and the ATMP requires that operators fly on designated routes that have been modified from current routes to avoid flying over noise sensitive resources, including historic properties. The designated routes in the ATMP are depicted in Exhibit 5 (Attachment B of the FAA's finding of effect letter). See also Exhibit 7 to this letter which depicts current routes compared to the routes that would be required under the ATMP in relation to historic properties in the Park. The ATMP contains daily caps on the number of air tours that may be flown where there is no current daily limit. The ATMP also sets a minimum altitude 1,100 to 1,600 ft. AGL higher than that currently flown by the operators under interim operating authority.

Under NPATMA, interim operating authority terminates 180 days after an ATMP is established.⁴⁹ U.S.C. §40128(c)(2)(E). However, the ATMP explains that interim operating authority for the Park and for the Eastern Cherokee tribal lands abutting the Park will be terminated as of the effective date of the ATMP.

The Tennessee SHPO's Objection and the FAA's Response

The FAA thoroughly analyzed the effects of the undertaking and supported its determination of "no adverse effect" in its May 3, 2022 letter. See Exhibit 5. The FAA sent the correspondence to all 22 consulting parties—including the Tennessee and North Carolina SHPOs because the Park is located in both states—requesting that they concur with the agency's finding. The only responsive consulting parties were the North Carolina SHPO, the Cherokee National Forest, and the Tribal Historic Preservation Officers for the Catawba Tribe and Poarch Band of Indians, all of whom concurred with the

FAA's proposed finding of no adverse effects for the undertaking, and the Tennessee SHPO, who objected to the finding in a May 19, 2022 email.

The Tennessee SHPO explained its objection as follows:

Setting is an integral part of the integrity for many of the resources within the Great Smoky Mountains National Park that are eligible or listed in the National Register of Historic Places. The presence of both visual and auditory disturbance from helicopters diminishes the integrity of these resources. We recognize and appreciate that the Air Tour Management Plan is being developed to minimize these visual and auditory effects from air tours that have been operated over the Great Smoky Mountains National Park for over 20 years and that never went through compliance. However, as air tours will still be operated over the park under this plan, the adverse effect is still present. The minimization presented in the Air Tour Management Plan has been thoughtfully planned out and should be laid out in a Memorandum of Agreement along with any mitigation for the continuance of the air tours over the park.

Exhibit 5, pp. 31-32, May 19, 2022 email from E. Patrick McIntyre, Jr., Tennessee SHPO to FAA's Federal Preservation Officer.

The Tennessee SHPO's objection is misplaced for the following reasons. First, while the FAA agrees that setting is an important part of the integrity of the resources at the Park, the Tennessee SHPO is using the wrong standard to assess effects from the undertaking's noise and visual elements. The Tennessee SHPO asserts that "[t]he presence of both visual and auditory disturbance from helicopters diminishes the integrity of these resources." *Id.* In other words, the Tennessee SHPO is suggesting that the mere *presence* of visual and auditory elements from helicopters causes an adverse effect. However, this is not the standard the regulations implementing the National Historic Preservation Act impose when assessing visual and auditory effects from an undertaking. Rather, the standard is whether there is an *introduction* of visual or audible elements that diminish the integrity of the property's significant historic features. *See* 36 CFR §800.5(a)(2)(v).

As noted above and explained more fully in the FAA's May 3, 2022 finding of effect letter (*see* Exhibit 5), air tours have been conducted for well over 20 years and are currently conducted under the interim operating authority that the FAA was required to grant operators under NPATMA. Thus, the undertaking—developing and implementing the ATMP—would not *introduce* visual or auditory effects from air tours that would diminish significant historic features, but would rather reduce such effects on historic properties in the Park. Indeed, the Tennessee SHPO recognizes that the ATMP "is being developed to *minimize* these visual and auditory effects from air tours. . . ." (emphasis added).

It is possible that the Tennessee SHPO does not accept or consider the implementation of the ATMP for the Park to be the undertaking. However, it is the sole responsibility of the agency official to determine the undertaking, 36 CFR § 800.3(a), and in accordance with 36 CFR § 800.16(y), the FAA has defined the undertaking as such. Therefore, the FAA determined in the finding of effect letter, the implementation of the ATMP would not, directly or indirectly, alter the integrity of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling or association.

Second, there was never a Federal undertaking related to air tours over the Park until the present one. Prior to NPATMA, the FAA did not regulate air tours over national parks and the NPS did not have authority to regulate commercial air tours. After the passage of NPATMA, the FAA granted interim operating authority to existing operators pursuant to Congress's mandate, which, as a non-discretionary act, did not necessitate Section 106 compliance. *See Sugarloaf Citizens Ass'n v. FERC*, 959 F.2d at 513.

Therefore, neither the FAA nor the NPS had any compliance obligations under Section 106 related to air tours over the Park until the proposed undertaking at issue here—the ATMP.

Upon receipt of the Tennessee SHPO's objection, in accordance with 36 CFR §800.5(c)(2), the FAA continued consultation with the Tennessee SHPO in an effort to resolve the objection to the proposed finding. Representatives from the FAA and the NPS met with staff from the Tennessee SHPO on June 9 and 15, 2022. During these meetings, the Tennessee SHPO staff expressed concern regarding the scope of the undertaking and that if it had the opportunity to review air tours when they first occurred over the Park, they would have found there to be an adverse effect. However, as discussed above, the undertaking was properly defined by the agency. Furthermore, we explained that air tours over the Park are part of the existing condition and the required analysis under Section 106 is of the undertaking—the implementation of the ATMP. Finally, the ATMP would *not* introduce visual and auditory impacts that would diminish the integrity of properties' significant historic features but would reduce them from existing conditions where air tours are being conducted pursuant to interim operating authority. See Exhibit 5, the FAA's Finding of Effect letter, May 3, 2022.

After these meetings, the Tennessee SHPO still maintained its opposition to the FAA's proposed finding. On July 22, 2022, the FAA contacted the Tennessee SHPO staff to determine if they would agree to a conditional no adverse effect letter in accordance with 36 CFR §800.5(c). The Tennessee SHPO declined.

Request for Review and Concurrence

For these reasons, the undertaking would not diminish the characteristics of any historic properties located within the APE but instead would represent a reduction in audible and visual effects on historic properties when compared to existing conditions. And the FAA respectfully requests review of its proposed finding of no adverse effect on historic properties.

Should you have any questions regarding any of the above, please contact me at 202-267-4185 or Judith.Walker@faa.gov and copy the ATMP team at ATMPTeam@dot.gov.

Sincerely,



Judith Walker
Federal Preservation Officer
Senior Environmental Policy Analyst
Environmental Policy Division (AEE-400)
Federal Aviation Administration

CCs:

E. Patrick McIntyre, Jr., Executive Director, Tennessee State Historic Preservation Office
Kelley Reid, Historic Preservation Specialist, Tennessee State Historic Preservation Office

Enclosures

- Exhibit 1 – Letter Initiating Consultation, dated March 29, 2021, and Responses
- Exhibit 2 – Letter re Proposed Undertaking and APE, dated August 30, 2021, and Responses
- Exhibit 3 – Letter re Initial Historic Property Identification, dated January 27, 2022, and Responses
- Exhibit 4 – Revised Historic Property Identification letter, dated February 4, 2022, and Responses
- Exhibit 5 – Finding of Effects Letter, dated May 3, 2022, and Responses
- Exhibit 6 – Consultation Invitation to Additional Tribes, dated June 24, 2022, and Responses
- Exhibit 7 – Supplemental Graphics Depicting Existing and Proposed Routes Under the ATMP



October 6, 2022

Ms. Judith Walker
Federal Preservation Officer
Senior Environmental Policy Analyst
Office of Environment and Energy
Federal Aviation Administration
US Department of Transportation
800 Independence Avenue
Washington, DC 20591

Ref: *Proposed Air Tour Management Plan (ATMP) at Great Smoky Mountains National Park
Swain and Haywood Counties, North Carolina and Sevier, Blount, and Cocke Counties,
Tennessee*
ACHP Project Number: 018744

Dear Ms. Walker:

On September 6, 2022, the Federal Aviation Administration (FAA) requested that the Advisory Council on Historic Preservation review its finding of “no adverse effect” for the referenced undertaking. Our advisory comments were requested pursuant to Sections 800.5(c)(2) and (3) of the regulations implementing Section 106 of the National Historic Preservation Act (NHPA), “Protection of Historic Properties” (36 CFR Part 800). As further detailed below, the Tennessee State Historic Preservation Officer (SHPO) has objected to the FAA’s finding. Based on our review, it is the ACHP’s advisory opinion that FAA has appropriately applied the Criteria of Adverse Effect pursuant to 36 CFR § 800.5(a)(1) for this undertaking. Our conclusion is elaborated upon below.

Background

FAA’s undertaking consists of the development and implementation of an Air Tour Management Plan (ATMP) for the Great Smoky Mountains National Park (Park). Development of this ATMP or a voluntary agreement is required to comply with the National Parks Air Tour Management Act (NPATMA). The undertaking does not include the operation of air tours themselves but implementation of a plan to regulate them at this and other national parks in order to “develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon the natural and cultural resources, visitor experiences, and tribal lands.” (49 USC §40128(b)(1)(B)). Commercial air tours have been operating over the Park well before the NPATMA was enacted in 2000. Prior to the NPATMA, air tour operators were subject only to FAA’s general safety regulations and after 2005 air tours operated in accordance with an interim operating authority, also required by the NPATMA, for which compliance with Section 106 was not required. Therefore, the baseline or existing condition against which FAA is assessing the potential effects of the undertaking is air tour operation prior to the implementation of the ATMP (i.e., following the interim operating authority), not a condition in which no air tours operate.

The FAA, in consultation with the National Park Service (NPS) and consulting parties, identified historic properties within the Park that could be affected by the undertaking, and focused the assessment of effects on the potential for adverse effects from the audible or visual elements that could diminish the integrity of the property's significant historic features. In considering effects from the implementation of the ATMP, the FAA notes that the number of air tours per year has been decreased by over 50 percent, and the routes for the air tours align with existing transportation corridors and avoid noise sensitive historic properties. FAA states that because aircraft are transitory elements in a viewshed, visual effects tend to be relatively short in duration, decreasing the potential for visual effects to an historic property. Information on noise effects, provided by the NPS to supplement FAA's analysis, indicates that under existing conditions, noise related to commercial air tours is modeled to be greater than 35 decibels (dBA) for less than 35 minutes a day within the Park and greater than 52 dBA for less than 5 minutes a day within the Park. Because the ATMP would limit the number of flights and use the same or quieter aircraft flying at higher altitudes along routes aligned away from historic properties, noise effects would decrease under the ATMP, and would not diminish any aspect of integrity that is associated with quiet-like setting for any historic property in the APE. Accordingly, FAA determined that its undertaking would result in "no adverse effect" to historic properties. However, on May 16, 2022, the Tennessee SHPO objected to FAA's finding, noting that setting is an integral part of the integrity for many of the resources within the Great Smoky Mountains National Park that are eligible or listed in the National Register of Historic Places, and any noise, such as helicopters flying above for air tours, diminishes the integrity of this setting. While the Tennessee SHPO acknowledges that the ATMP includes measures to minimize visual and auditory effects from air tours over the Park, it believes the presence of visual and auditory disturbance from helicopters diminishes the integrity of setting of these historic properties. In subsequent meetings with the Tennessee SHPO to resolve the objection, the FAA noted that the baseline condition which must be used as the basis for the Section 106 analysis is not "no operation of air tours," but operation of air tours under the interim operating authority. Because the proposed ATMP minimizes visual and auditory effects from the interim air tour operation as outlined earlier, FAA believes that a finding of "no adverse effect" is appropriate. Despite the additional meetings to further discuss the issue, the Tennessee SHPO maintained its objection to FAA's finding.

ACHP's Review of Finding

FAA's application of the criteria of adverse effect appears reasonable because FAA modified the undertaking to avoid adverse effects by reducing the effects of past conditions, specifically by minimizing the frequency, modifying flight routes, and increasing the altitude so that noise from air tours is less likely to be audible from historic properties in the APE. Further, the nature of noise and visibility of helicopters conducting air tours is transitory, resulting in only temporary effects. The effects of the temporary noise and visibility of the helicopters is reversible, and does not result in any permanent physical alteration to the setting of these historic properties.

In requesting the ACHP's comments on this dispute, the FAA makes a case that it is the *introduction* of visual, atmospheric, or audible elements that may diminish the integrity of an historic property per 800.5(a)(2)(v), not *presence*. While the list of adverse effects in this section of the regulations is not exhaustive and other changes to these elements may also result in an adverse effect, the FAA's undertaking reduces effects to aspects of integrity, like setting, of historic properties in the APE, rather than creating a new or increasing the intensity of an adverse effect.

The ACHP understands and acknowledges the concerns of SHPOs, Indian tribes, and other consulting parties about the continuation of air tours and offers the following comments and recommendations to help improve consultation to assist the FAA in concluding the Section 106 review. The ACHP understands that the ATMP specifies an annual meeting among Park staff, the FAA Flight Standards District Office, and operators *may* be held to discuss implementation of the plan. The ACHP sees that this

meeting provides an opportunity for air tours to be reviewed annually by FAA and Park staff so that noise from their operation, among other potential effects, will continue to be monitored. With the participation of Park staff and application of noise models used by the NPS, air tour operations could be further assessed and altered if noise or other effects are found to be approaching the level of adverse for any historic properties in the APE. The ACHP recommends that this meeting be required for the first five years following implementation of the ATMP and the results of discussions be shared among SHPOs, Indian tribes, and other consulting parties, with an invitation for their participation, as needed.

There is a need for consulting parties to understand how responsibility for ongoing implementation of the ATMP will transfer to Park staff once the Section 106 process is concluded, and how FAA, the Park and NPS will consider comments and questions regarding the ATMP's implementation. FAA should take steps to ensure that the ATMP contains sufficient provisions to: (1) ensure that self-reported air tours do not exceed their daily and annual basis or their time restrictions; (2) report potential violations to FAA and the NPS; and (3) develop corrective action measures if violations are identified. To foster transparency, the ACHP recommends that the FAA provide a copy of the final ATMP to the consulting parties. Should the FAA determine that implementation of the ATMP at this or any other park is not sufficient to reduce the effects of air tours below the threshold of adverse, the FAA should consider whether imposing stronger conditions or other measures to minimize adverse effects would require the execution of a Memorandum of Agreement (MOA).

In accordance with 36 CFR § 800.5(c)(3)(ii)(B), the FAA is required to take into account this advisory opinion in reaching a final decision on its finding of "no adverse effect," and provide to the ACHP, SHPOs, Indian tribes, and other consulting parties its rationale and a summary of how these advisory comments were considered. If the FAA affirms its initial finding, once the summary of the decision has been sent to the ACHP and other parties, the agency official's Section 106 responsibilities are fulfilled for review of this undertaking.

Thank you for the opportunity to comment on this dispute regarding effects to historic properties. If we may be of further assistance, or you would like to discuss this matter, please contact Ms. Rachael Mangum, at (202) 517-0214, or via e-mail at rmangum@achp.gov.

Sincerely,



Jaime Loichinger
Assistant Director
Federal Permitting, Licensing, and Assistance Section
Office of Federal Agency Programs



United States Department of Transportation
FEDERAL AVIATION ADMINISTRATION
Office of Policy, International Affairs & Environment
Office of Environment and Energy

NATIONAL PARKS AIR TOUR MANAGEMENT PROGRAM

November 3, 2022

Re: Response to the Advisory Council on Historic Preservation's Opinion Pursuant to 36 CFR 800.5(c)(3)(ii)(B) on the Federal Aviation Administration's Proposed Finding of No Adverse Effect on Historic Properties from the Implementation of an Air Tour Management Plan for Great Smoky Mountains National Park (ACHP Project Number: 018744)

Ms. Jaime Loichinger
Assistant Director
Office of Federal Agency Programs
Advisory Council on Historic Preservation
401 F Street, Ste. 308
Washington, DC 20001

Dear Ms. Loichinger:

In response to the Advisory Council on Historic Preservation's (ACHP) review of the Federal Aviation Administration (FAA) finding of no adverse effect on historic properties from the implementation of an Air Tour Management Plan (ATMP) for Great Smoky Mountains National Park (the Park), in accordance with 36 CFR 800.5(c)(3)(ii)(B), the FAA, in coordination with the National Park Service (NPS), considered the following recommendations made by ACHP on October 6, 2022 (Exhibit 1):

- *The ACHP understands that the ATMP specifies an annual meeting among Park staff, the FAA Flight Standards District Office, and operators may be held to discuss implementation of the plan. The ACHP sees that this meeting provides an opportunity for air tours to be reviewed annually by FAA and Park staff so that noise from their operation, among other potential effects, will continue to be monitored. With the participation of Park staff and application of noise models used by the NPS, air tour operations could be further assessed and altered if noise or other effects are found to be approaching the level of adverse for any historic properties in the APE. The ACHP recommends that this meeting be required for the first five years following implementation of the ATMP and the results of discussions be shared among [State Historic Preservation Offices (SHPOs)], Indian tribes, and other consulting parties, with an invitation for their participation, as needed.*

The FAA acknowledges ACHP's recommendation to require an annual meeting for the first five years following the ATMP's implementation and share the results of those discussions with SHPOs, Indian tribes, and other consulting parties. The recommendation to require the annual meeting for the first five years will be incorporated into the ATMP for the Park. However, it is important for this meeting to be among the NPS, FAA, and operators. The NPS needs to be able to meet with the operators as it does with other entities that operate within park boundaries. However, the NPS does regularly meet with the SHPOs and can discuss concerns related to potential effects at those meetings and, if information related to effects of air tours on historic properties arises at the annual ATMP meeting, such information would be shared with consulting parties. The NPS also regularly meets with tribes that are culturally affiliated with the Park and can discuss potential impacts of air tours at those meetings.

- *FAA should take steps to ensure that the ATMP contains sufficient provisions to: (1) ensure that self-reported air tours do not exceed their daily and annual basis or their time restrictions; (2) report potential violations to FAA and the NPS; and (3) develop corrective action measures if violations are identified.*

The ACHP's recommended provisions are currently in the Park's ATMP. Outlined in Section 3.6 of the draft ATMP, operators are required to submit to the FAA and the NPS semi-annual reports regarding the number of commercial air tours over the Park or outside the Park but within ½ mile of its boundary that are conducted by the operator. Section 4.1 of the draft ATMP requires commercial air tour operators to equip all aircraft used for tours with flight monitoring technology and report that flight monitoring data in their semi-annual reports. These requirements, justified in Section 5.0 of the draft ATMP, ensure that the agencies will be able to monitor operations and compliance with the ATMP.

The draft ATMP includes reporting processes for potential violations as well as corrective measures for identified violations. Section 4.0 of the draft ATMP addresses the NPS' and FAA's responsibilities to monitor and oversee the compliance of commercial air tours over the Park with the terms and conditions in the ATMP, which will be incorporated into the operators' Operation Specifications (OpSpecs).¹ Non-compliance with the ATMP identified by NPS is reported to the local FAA Flight Standards District Office (FSDO). The public may also report allegations of non-compliance to the FSDO. If investigations determine non-compliance, it may result in partial or total loss of authorization to conduct commercial air tours. Any violation of OpSpecs shall be treated in accordance with FAA Order 2150.3, *FAA Compliance and Enforcement Program*.

- *To foster transparency, the ACHP recommends that the FAA provide a copy of the final ATMP to the consulting parties.*

¹ OpSpecs are issued by the FAA to each operator and prescribe the authorizations, limitations, and procedures under which air tour operations must be conducted and require certain other procedures under which each class and size of aircraft is to be operated.

The final ATMP for the Park and the accompanying Record of Decision will be made available to the public by posting on FAA and NPS public websites.

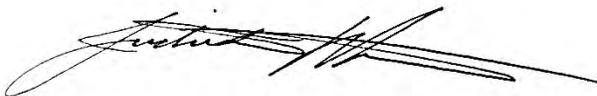
- *Should the FAA determine that implementation of the ATMP at this or any other park is not sufficient to reduce the effects of air tours below the threshold of adverse, the FAA should consider whether imposing stronger conditions or other measures to minimize adverse effects would require the execution of a Memorandum of Agreement (MOA).*

The ATMP may be amended to address unanticipated adverse effects as provided in Section 9.0 of the draft ATMP. Specifically, the ATMP may be amended at any time “if the NPS, by notification to the FAA and the operators, determines that the ATMP is not adequately protecting Park resources and/or visitor enjoyment” or if the agencies determine that changes to the ATMP are necessary to address new information or changed circumstances. In addition, the FAA and the NPS will jointly consider requests from interested parties to amend the ATMP. Amendments to the ATMP require compliance with applicable laws, including NEPA, the Endangered Species Act, and Section 106 of the NHPA. Notice of all proposed amendments to the ATMP will be published in the Federal Register for public comment. With respect to the application of Section 106 under these circumstances, determination of effects and the appropriateness of executing a Memorandum of Agreement will be considered at that time.

The FAA reaffirms its commitment to ensuring ATMP compliance and accepts the recommendations provided by ACHP. The aforementioned recommendations if not already included in the ATMP will be included in the final ATMP. Once finalized, the ATMP will be made available to the public as well as consulting parties.

Should you have any questions regarding any of the above, please contact me at 202-267-4185 or Judith.Walker@faa.gov and copy the ATMP team at ATMPTeam@dot.gov.

Sincerely,



Judith Walker
Federal Preservation Officer
Senior Environmental Policy Analyst
Environmental Policy Division (AEE-400)
Federal Aviation Administration

CCs:

E. Patrick McIntyre, Jr., Executive Director, Tennessee State Historic Preservation Office
Kelley Reid, Historic Preservation Specialist, Tennessee State Historic Preservation Office

Enclosure

Exhibit 1 – Letter Initiating ACHP Review, dated September 6, 2022, and Response

APPENDIX G

NPS Statement of Compliance

APPENDIX G

NATIONAL PARK SERVICE STATEMENT OF COMPLIANCE

Great Smoky Mountains National Park Air Tour Management Plan

Compliance with NPS Management Policies Unacceptable Impact and Non-Impairment Standard

As described in National Park Service (NPS or Service) 2006 Management Policies, § 1.4.4, the National Park Service Organic Act prohibits the impairment of park resources and values. *Guidance for Non-Impairment Determinations and the NPS NEPA Process* (September 2011) provides guidance for completing non-impairment determinations for NPS actions requiring preparation of an environmental assessment (EA) or environmental impact statement (EIS) pursuant to the National Environmental Policy Act (NEPA). The applicable NPS guidance does not require the preparation of a non-impairment determination where a categorical exclusion (CE) is applied because impacts associated with CEs are generally so minimal they do not have the potential to impair park resources. Nonetheless, out of an abundance of caution, the NPS has completed a non-impairment analysis for the Great Smoky Mountains National Park (Park) Air Tour Management Plan (ATMP) and determined that it will not result in impairment of Park resources, or in unacceptable impacts as described in § 1.4.7.1 of the 2006 NPS Management Policies.

Sections 1.4.5 and 1.4.6 of Management Policies 2006 further explain impairment. Section 1.4.5 defines impairment as an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. Section 1.4.5 goes on to state:

An impact to any park resource or value may, but does not necessarily, constitute an impairment. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park, or
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or
- identified in the park's general management plan or other relevant NPS planning documents as being of significance.

Section 1.4.6 of Management Policies 2006 identifies the park resources and values that are subject to the no-impairment standard. These include:

- the park's scenery, natural and historic objects, and wildlife, and the processes and conditions that sustain them, including, to the extent present in the park: the ecological, biological, and physical processes that created the park and continue to act upon it; scenic features; natural visibility, both in daytime and at night; natural landscapes; natural

soundscapes and smells; water and air resources; soils; geological resources; paleontological resources; archeological resources; cultural landscapes; ethnographic resources; historic and prehistoric sites, structures, and objects; museum collections; and native plants and animals;

- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- the park's role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- any additional attributes encompassed by the specific values and purposes for which the park was established.

NPS non-impairment analysis normally does not include discussion of impacts to visitor experience, socioeconomics, public health and safety, environmental justice, land use, Park operations, wilderness, etc., as these do not constitute impacts to Park resources and values subject to the non impairment standard under the Organic Act. *See* Management Policies § 1.4.6.

Non-Impairment Determination for the Great Smoky Mountains National Park ATMP

The purposes of Great Smoky Mountains National Park, along with Park significance statements and a description of the Park's fundamental resources and values, are described in the *Foundation Document for Great Smoky Mountains National Park (Foundation Document)*, 2016:

Great Smoky Mountains National Park preserves a vast expanse of the southern Appalachian Mountains ecosystem including its scenic beauty, extraordinary diversity of natural resources, and rich human history, and provides opportunities for the enjoyment and inspiration of present and future generations. *Foundation Document, page 4.*

The Park's significance statements highlight resources that may be impacted by commercial air tours, including wildlife and cultural resources and the outstanding views within the park. *See*, *Foundation Document, page 5.* Additionally, clean air and backcountry and wilderness experiences are listed as fundamental resources and values of the Park, both of which are potentially impacted by air tours (*Foundation Document, page 7-8*).

As a basis for evaluating the potential for impairment or unacceptable impacts on Park resources, the NPS relied on the environmental analysis in the Environmental Screening Form (ESF) (Appendix B to the Record of Decision (ROD)), the Section 7 documentation for the Endangered Species Act (Appendix E to the ROD), and the Section 106 documentation for the National Historic Preservation Act (Appendix F to the ROD). The ESF includes analysis of impacts to air quality; biological resources including wildlife, wildlife habitat, and special status species; cultural resources including cultural landscapes, ethnographic resources, prehistoric and historic structures; soundscapes; lightscapes; wilderness; visitor experience; and viewsheds. The ESF considers both the change from current conditions as well the impact from the commercial air tours authorized under the ATMP. *See* ESF, Appendix B to the ROD.

The ATMP would result in ongoing impacts to the Park's natural and cultural soundscapes. Acoustic conditions in the Park were measured in 2005 and 2006 (Lee et al., 2016) and also in 2016 (Carpenter and Beeco, 2021). At the locations nearest commercial air tour routes, the existing ambient (L_{50})¹ sound level was reported to be 31-36 decibels in 2005 and 2006 and 27-33 decibels in 2016, while the natural ambient (L_{nat}) sound level was reported to be 21-32 decibels in 2005 and 2006 and 25-28 decibels in 2016². These metrics confirm that the natural acoustic environment at these sites experience disturbances from anthropogenic noise. To determine the severity of the effect and potential for impairment of the soundscape, the NPS considered not just the presence of noise and potential for disturbance, but also the duration, frequency, and amplitude of noise. Noise modeling for the ATMP discloses the amount noise expected from 946 annual commercial air tours. The modeling used a busy day, defined as a 90th percentile day (*See* ESF, Appendix B to the ROD), which was comprised of a total of 7 flights. Most areas of the Park affected by air tour noise would experience noise above 35 decibels, a level at which quieter natural sounds would be masked, less than 5 minutes on a peak day; a smaller area would experience noise at or above 35 decibels for up to 5 – 20 minutes on a peak day; and an even smaller area (where different routes cross) would experience noise at or above 35 decibels for up to 20 - 35 minutes on a peak day. Only areas near or directly below an air tour route would experience noise above 52 decibels, between 0-5 minutes on a peak day. At 52 decibels a visitor may reasonably expect interference with Park interpretive programs. Noise may reach 70 decibels in a few areas directly below the designated routes (ESF, Figures 2., 3. and 6. Noise Technical Analysis, Appendix B to the ROD). Operators collectively may not exceed a total of 5 air tours a day, except on up to 40 'flex days' per a year when the allowable number of flights is 7. Because of this, there will be opportunities to experience the Park's natural and cultural soundscape at different times throughout the day every day. Noise from air tours will not be continuous. Additionally, roughly half of the Park will not experience noise from air tours. Finally, air tour routes were specifically routed to ensure standoff areas around important cultural locations. Many of these locations have experienced air tour noise in the past that inhibited opportunities to interpret the Park's cultural and natural resources. Commercial air tours over Cades Cove, Elkmont Historic District, and the Appalachian National Scenic Trail (Appalachian Trail), in addition to other sensitive locations, are prohibited under the ATMP limiting impacts to the Park's cultural soundscape. In conclusion, the natural and cultural soundscapes of the Park remain unimpaired and without unacceptable impacts under the ATMP since noise impacts are limited to only 946 instances per year, those instances will generally not

¹ Noise metrics referenced in this document are discussed in detail on pages 8-9 and 16-17 of the ESF.

² It is necessary to note that the intent of these reports are to identify general acoustic conditions of the park. Sampling locations are generally chosen to represent larger areas the park based upon considerations such as vegetation cover and topography. The acoustic monitoring in these reports were not intended to measure any specific noise, including are aircraft or air tour noise. Further, what is mostly reported are median sound pressure levels. Like any median measure, this metric does not drastically change if only a few loud events per day occur. Additionally for reference, because decibels are measured on a logarithmic scale, an increase in 3 dB represents a doubling of sound pressure level.

exceed 5 times/ per day, noise only exceeds 52 decibels for 5 minutes on a peak day, and roughly half of the Park will experience no noise from air tours. The noise is short in duration at any one location, with the loudest noise focused near or beneath the designated routes, leaving the Park's natural and cultural soundscape available for the enjoyment by present and future generations.

ATMP impacts to wildlife occur from noise generated by low flying tour aircraft. The analysis in the ESF discloses that noise would likely be heard by wildlife near the route. *See* Appendix B to the ROD. Generally, noise from commercial air tours may impact wildlife in a number of ways: altered vocal behavior, breeding relocation, changes in vigilance and foraging behavior, predator avoidance, reproductive success, and impacts on individual fitness and the structure of ecological communities to name a few (Shannon et al., 2016; Kunc et al., 2016; Kunc and Schmidt, 2019). To determine the severity of the effect and potential for impairment, the NPS considered not just the presence of noise and potential for disturbance, but also the duration, frequency, and amplitude of noise. The analysis demonstrates that the 946 commercial air tours would impact the Park at levels above 35 decibels for less than 35 minutes on a peak day. The minimum altitude of 2,600 ft above ground level (AGL) limits noise exposure to wildlife in the Park, including the Park's threatened and endangered species. The NPS concluded, with concurrence from the U.S. Fish and Wildlife Service, that the commercial air tours authorized by the ATMP may affect but are not likely to adversely affect threatened and endangered species in the Park³ (Section 7 Consultation under the Endangered Species Act for Great Smoky Mountains National Park Air Tour Management Plan, Appendix E to the ROD). In conclusion, the ATMP will not impair the Park's wildlife or its habitat because the impacts from the commercial air tours do not individually rise above 35 decibels for more than 35 minutes on a peak day and on most days would only occur no more than 5 times a day. As documented through this analysis, and in the ESF, impacts to wildlife, either individually or cumulatively, would occur on an individual level and would not affect wildlife on the population level. These impacts do not impair the functioning of the Park's unique ecosystems and the wildlife within. Consistent with the no adverse effect determination, wildlife, including threatened and endangered species, will persist in the Park without a loss of integrity and visitors will continue to enjoy wildlife and their habitats.

Impacts to the Park's cultural resources would be similar in frequency and duration to those described above for wildlife. Acting as lead agency for the purposes of compliance with Section 106 of the National Historic Preservation Act with respect to the ATMP, the FAA concluded, in coordination with the NPS, that there would be no adverse effects on historic properties from the 946 commercial air tours authorized under the ATMP. The North Carolina State Historic Preservation Officer concurred with that determination. However, the Tennessee Historic Preservation Officer did not concur. As a result, the FAA requested that the Advisory Council on Historic Preservation (Advisory Council) review the FAA's proposed finding of no adverse effect on historic properties from the implementation of the ATMP. The Advisory Council issued an advisory opinion finding that the FAA appropriately applied the Criteria of Adverse Effect pursuant to 36 CFR § 800.5(a)(1). The ESF and consultation materials documented that the

³ May affect, but not likely to adversely affect" means that all effects are beneficial, insignificant, or discountable.

ATMP would not diminish the Park's cultural landscape's integrity of location, design, setting, materials, workmanship, feeling, or association. Additionally, the determination documented that commercial air tours do not adversely affect those elements of ethnographic resources that make them significant to traditionally associated groups, nor does the ATMP interfere with the use of ethnographic resources by these groups. Finally, the analysis documented that the ATMP does not adversely affect the feeling and setting of archaeological sites or historic structures that make those sites and structures eligible for listing on the National Register of Historic Properties. *See* Appendices B and F to the ROD. Since there are no adverse effects on these resources, these resources would maintain their integrity and purpose and therefore remain unimpaired for the enjoyment of future generations under the ATMP.

As disclosed in the ESF, the ATMP may have limited impacts on the Park's viewshed, including views from the Appalachian National Scenic Trail which is within the park boundary. The Park's views are a fundamental resource. As noted in the ESF, aircraft are not typically included in viewshed analyses because they are transitory. They are most noticeable because of the noise associated with them. The ATMP limits the number of air tours allowed on routes closest to the Appalachian Trail to 43 total. Noise from each of the tours is unlikely to last longer than 5 minutes on a peak day. Thus, noted above, due to the short duration of the effects as well as the limited frequency, impacts to the Park's viewshed will be limited. As a result, visitors will continue to be able to enjoy the Park's beautiful views unimpaired.

The NPS completed an air quality analysis and determined that the 946 commercial air tours authorized under the ATMP contributes a minimal amount of emissions to the local air quality and would not have a regional impact (*See* ESF, Air Quality Technical Analysis, Appendix B to the ROD). Because the amount of emissions is so small the ATMP does not affect the integrity of the Park's air quality, leaving it unimpaired for future enjoyment.

As demonstrated here and in the analysis referenced above, the impacts to these resources, neither individually nor cumulatively, would preclude the NPS from achieving the purpose of the Park or desired conditions for resources; and would not unreasonably interfere with Park programs or activities, another appropriate use, the overall atmosphere of peace and tranquility or the natural soundscape, or NPS concessioner or contractor operations or services. As a result, there will not be impairment of or unacceptable impacts to the Park's natural and cultural resources or visitor experience. Impacts to other resources potentially affected were considered so small and insignificant that they did not warrant a written analysis here.

The ATMP sections on adaptive management and amending the plan will allow Park managers to ensure that unanticipated or unacceptable impacts do not occur and the requirement for implementing flight tracking technologies included in the ATMP will better enable the NPS to monitor and enforce the restrictions in the ATMP.

Compliance with NPS Management Policies Regarding Appropriate Uses

A separate written appropriate use analysis is not required under NPS 2006 Management Policies. In recognition of comments suggesting that the NPS consider whether commercial air

tours are an appropriate use over the Park, for this ATMP the NPS has decided to briefly address the issue of appropriate use below.

NPS 2006 Management Policies § 1.5 state:

An “appropriate use” is a use that is suitable, proper, or fitting for a particular park, or to a particular location within a park. Not all uses are appropriate or allowable in units of the national park system, and what is appropriate may vary from one park to another and from one location to another within a park.”

Section 8.1.2 of Management Policies further explain:

The fact that a park use may have an impact does not necessarily mean it will be unacceptable or impair park resources or values for the enjoyment of future generations. Impacts may affect park resources or values and still be within the limits of the discretionary authority conferred by the Organic Act. In these situations, the Service will ensure that the impacts are unavoidable and cannot be further mitigated.

In determining whether a use is appropriate, the NPS evaluates:

- consistency with applicable laws, executive orders, regulations, and policies;
- consistency with existing plans for public use and resource management;
- actual and potential effects on park resources and values;
- total costs to the Service;
- whether the public interest will be served.

Parks may allow uses that are appropriate even if some individuals do not favor that particular use. The National Park Air Tour Management Act (NPATMA) contemplates that commercial air tours may be an acceptable use over National Park System units so long as protections are in place to protect park resources from significant impacts of such tours, if any. Therefore, commercial air tours are authorized by law, though not mandated, and generally may be appropriate where they do not result in significant impacts or cause unacceptable impacts on park resources and values.

Great Smoky Mountains National Park ATMP – consistency with NPS Management Policies for Appropriate Uses

The NPS relied on the mitigations in the ATMP (Appendix A to the ROD), the analysis in the ESF (Appendix B to the ROD), Section 7 documentation for the Endangered Species Act (Appendix E to the ROD), the Section 106 documentation for the National Historic Preservation Act (Appendix F to the ROD), the unacceptable impact and non-impairment analysis above, and the language in NPATMA as a basis for finding that the ATMP’s authorization of 946 commercial air tours over Great Smoky Mountains National Park is an appropriate use.

- The ATMP for Great Smoky Mountains National Park is consistent with applicable laws, executive orders, regulations, and policies. NPATMA specifically provides that air tours may be allowed over National Park System units where they do not result in significant

impacts. Commercial air tours are not prohibited in applicable laws, regulations, or policies.

- The ATMP's authorization of 946 commercial air tours over the Park is consistent with the Park's existing management plans. No existing management plans preclude commercial air tours, though the Park may set different management direction in the future. Mitigations, including limiting the number of commercial air tours per year, restricting commercial air tours to the designated routes, and setting minimum altitudes, limit impacts to visitor experience and other resources.
- The effects of the 946 commercial air tours authorized in the ATMP on Park resources was evaluated in the materials referenced above and unacceptable impact and non-impairment discussion above. While air tours may occur every day, on most days there will be no more than 5 air tours. Roughly half the Park will not experience any noise from air tours. The commercial air tours are short in duration and do not rise to the level of an unacceptable impact nor impair Park resources. The NPS does not interpret § 8.1.1 to require the NPS to contemplate mitigating Park uses to the point that the use no longer has any impact or no longer can occur. Rather, this section requires the NPS to consider whether there are mitigations that can reduce impacts to Park resources and whether the impacts of those uses, after applying mitigations, result in unacceptable impacts or impairment. In this case, the NPS evaluated the impacts of 946 commercial air tours and included specific mitigations in the ATMP to minimize impacts to Park resources. The NPS acknowledges that prohibiting commercial air tours entirely would avoid all impacts to Park resources, but the elimination of commercial air tours is not required to avoid unacceptable impacts or impairment of Park resources. The NPS believes the mitigations in the ATMP are sufficient to protect Park resources and that additional mitigations are not required because the impacts associated with the ATMP are not significant and do not result in unacceptable impacts or impairment.
- The cost to the NPS from implementing the ATMP includes yearly compiling of operator reported commercial air tours and aircraft monitoring data which is done in coordination with the Federal Aviation Administration. These activities would occur anyway, because they are required under NPATMA, regardless of whether the Park has an ATMP because commercial air tours are currently authorized under interim operating authority (IOA). This is done by the NPS's Natural Sounds and Night Skies Division which also provides noise monitoring, modeling, and planning support to parks across the country.
- While some visitors may not like commercial air tours, others appreciate the opportunity to view the Park from a commercial air tour. Commercial air tours, as contemplated in NPATMA, serve the public in this way.

Additional commercial air tours and commercial air tours on other routes may not be appropriate. However, the NPS has determined that because the ATMP authorizes 946 commercial air tours, because those commercial air tours are restricted to designated routes, are relatively short in duration, avoids most of the Park's Historic Districts and interpretive centers, and are at an acceptable altitude, the ATMP is adequately protective of Park resources and the commercial air tours it authorizes are an appropriate use of the Park at this time.

Compliance with NPS Management Policies for Soundscape Management

A separate written compliance analysis for Soundscape Management is not required under NPS 2006 Management Policies. In recognition of comments suggesting that the NPS consider whether the ATMP complies with NPS soundscape policies and guidance, the NPS has opted to briefly discuss the issue with respect to this ATMP.

Management Policies § 4.9 states, “The National Park Service will preserve, to the greatest extent possible, the natural soundscapes of parks.” Section 5.3.1.7 similarly addresses cultural and historic resource sounds.

Section 8.4 specifically addresses overflights, including commercial air tours, which notes

Although there are many legitimate aviation uses, overflights can adversely affect park resources and values and interfere with visitor enjoyment. The Service will take all necessary steps to avoid or mitigate unacceptable impacts from aircraft overflights.

Because the nation’s airspace is managed by the Federal Aviation Administration (FAA), the Service will work constructively and cooperatively with the Federal Aviation Administration and national defense and other agencies to ensure that authorized aviation activities affecting units of the National Park System occur in a safe manner and do not cause unacceptable impacts on park resources and values and visitor experiences.

Director’s Order #47 gives further guidance for the management of natural and cultural soundscapes, requiring the consideration of both the natural and existing ambient levels.

Great Smoky Mountains National Park ATMP – consistency with NPS Management Policies for Soundscape Management.

Consistent with Section 8.4, the NPS worked constructively and collaboratively with FAA to develop the ATMP. The NPS relied on the mitigations in the ATMP (Appendix A to the ROD), the analysis in the ESF (Appendix B to the ROD), the Section 7 documentation for the Endangered Species Act (Appendix E to the ROD), the Section 106 documentation for the National Historic Preservation Act (Appendix F to the ROD), and the unacceptable impact and non-impairment analysis above as a basis for finding that the ATMP complies with the policies and guidance for management of natural and cultural soundscapes.

Consistent with Management Policies § 4.9, the ATMP eliminates some noise, or moves the Park closer to natural ambient conditions, by limiting commercial air tours to 946 per year, which is a reduction from the current authorized number (1,920) under IOA. In addition, the ATMP includes quiet technology incentives which could help reduce noise (*See* ATMP, Appendix A to the ROD). When developing the ATMP, the NPS considered the commercial air tour routes and evaluated the potential for noise to reach the most sensitive resources in the Park, including cultural and natural resources, and areas where commercial air tours could disrupt educational opportunities. The commercial air tours occur along designated routes, which protects the majority of these areas from the intermittent, and short duration noise effects of commercial air tours.

Management Policies § 5.3.1.7 prohibits excessive noise and § 1.4.7.1 prohibits actions that unreasonably interfere with “the atmosphere of peace and tranquility, or the natural soundscape maintained in wilderness and natural, historic, or commemorative locations within the park.” Acoustic conditions in the Park were measured in 2005 and 2006 (Lee et al., 2016) and also in 2016 (Carpenter and Beeco, 2021). At the locations nearest commercial air tour routes, the existing ambient (L_{50}) sound level was reported to be 31-36 decibels in 2005 and 2006 and 27-33 decibels in 2016, while the natural ambient (L_{nat}) sound level was reported to be 21-32 decibels in 2005 and 2006 and 25-28 decibels in 2016. When determining the severity of the impacts, results from the noise modeling for the ATMP were considered against both the natural soundscape and existing soundscape. As discussed above under the non-impairment discussion, the noise from commercial air tours is limited in intensity, spatially, and temporally. Routes were specifically designed to avoid cultural and interpretive centers. Therefore, the noise from commercial air tours is neither excessive nor does it unreasonably interfere with the peace and tranquility of the Park, wilderness character, or natural or historic or commemorative locations. In conclusion, the ATMP complies with § 8.4, § 4.9, and § 5.3.1.7 of the Management Policies, because the NPS has successfully collaborated with the FAA and developed an ATMP that will not result in unacceptable impacts to natural or cultural soundscapes or impairment of Park resources.

Compliance with NPS Management Policies for Wilderness Preservation and Management

A separate written compliance analysis for Wilderness Preservation and Management is not required under NPS Management Policies. In recognition of comments suggesting that the NPS consider whether the ATMP complies with NPS wilderness policies and guidance, the NPS has elected to briefly discuss the issue with respect to this ATMP.

Management Policies for wilderness preservation and management do not specifically address commercial air tours. However, § 7.3 of Director’s Order #41 notes that commercial air tours are inconsistent with preservation of wilderness character and requires the NPS to consider ways to further prevent or minimize impacts of commercial air tours on wilderness character.

The ATMP does not allow commercial air tours to take off or land within wilderness. Therefore, § 4(c) of the Wilderness Act and § 6.4 of Director’s Order #41 do not apply and a minimum requirements analysis is not required. While the NPS did not complete a minimum requirements analysis, the NPS did analyze and report on the impacts of commercial air tours on wilderness character and minimized those impacts.

Great Smoky Mountains National Park ATMP – consistency with NPS Management Policies for Wilderness Preservation and Management.

The NPS relied on the mitigations in the ATMP (Appendix A to the ROD), the analysis in the ESF (Appendix B to the ROD), the unacceptable impact and non-impairment analysis above, and soundscape management analysis above as a basis for finding that the ATMP complies with the policies and guidance for Wilderness Preservation and Management.

Approximately 89% of the Park (464,544 acres) is recommended or proposed wilderness (418,031 acres recommended, 46,513 acres proposed), which is managed as designated wilderness by the NPS, pursuant to the 2006 NPS Management Policies. All of the air tour routes authorized in the ATMP fly over areas managed as wilderness. Thus, the NPS considered the impact of 946 commercial air tours on wilderness character. The ESF acknowledges noise from aircraft could impact wilderness character although the analysis demonstrates that the 2,600 AGL requirement and route designations limit potential impacts. As described in detail above and in the ESF, noise from commercial air tours over wilderness will be infrequent and short. Wilderness character will remain unimpaired under the ATMP since a Park visitor will have the opportunity to hear the sounds of nature and experience the primeval character of the Park's wilderness, and the natural and cultural soundscape will remain largely unmarred by air tour noise the vast majority of time.

Consistent with Director's Order #41, § 7.3, the ATMP includes mitigations which minimize impacts to wilderness character including limiting commercial air tours to 946 per year, requiring aircraft to fly above 2,600 ft. AGL, and requiring the 946 commercial air tours to stay on designated routes (*See* ATMP, § 5.0, Appendix A to the ROD).

References

- Carpenter, G. & Beeco, A. J. (2021). Acoustic Monitoring Report 2016. Available at <https://irma.nps.gov/DataStore/DownloadFile/662080>
- Kunc, H. P., McLaughlin, K. E., & Schmidt, R. (2016). Aquatic noise pollution: Implications for individuals, populations, and ecosystems. *Proceedings of the Royal Society B: Biological Sciences*, 283(1836), 20160839. Available at <https://doi.org/10.1098/rspb.2016.0839>
- Kunc, H. P., & Schmidt, R. (2019). The effects of anthropogenic noise on animals: A meta-analysis. *Biology Letters*, 15(11), 20190649. Available at <https://doi.org/10.1098/rsbl.2019.0649>
- Lee, C., MacDonald, J., Scarpone, C., & Rapoza, A. (2016). Great Smoky Mountains National Park: Baseline Ambient Sound Levels 2005 and 2006.
- National Park Service. (2000). Director's Order #47: Soundscape Preservation and Noise Management. Available at https://www.nps.gov/subjects/policy/upload/DO_47_12-1-2000.pdf
- National Park Service. (2006). Management Policies, 2006. Available at https://www.nps.gov/subjects/policy/upload/MP_2006.pdf
- National Park Service. (2011). Guidance for Non-Impairment Determinations and the NPS NEPA Process. Available at <https://www.nps.gov/subjects/nepa/>
- National Park Service. (2013). Directors Order #41. Wilderness Stewardship. Available at https://www.nps.gov/policy/DOrders/DO_41.pdf
- National Park Service. (2016). Foundation Document for Great Smoky Mountains National Park.
- Shannon, G., McKenna, M.F., Angeloni, L.M., Crooks, K.R., Fristrup, K.M., Brown, E., Warner, K.A., Nelson, M.D., White, C., Briggs, G., McFarland, S., & Wittemyer, G. (2015). A synthesis of two decades of research documenting the effects of noise on wildlife. *Biological Reviews*, 91(4) 982-1005. Available at <https://doi.org/10.1111/brv.12207>
- The Wilderness Act, (1964), Public Law 88-577 (16 U.S.C. §§ 1131-1136) 88th Congress, Second Session (As amended).

APPENDIX H

Summary of Public Comments and Comment
Analysis on the Draft Air Tour Management
Plan for Great Smoky Mountains National Park

**US Department of Transportation
Federal Aviation Administration**



**US Department of the Interior
National Park Service**



Great Smoky Mountains National Park

Summary of Public Comments and Comment Analysis of the Draft Air Tour Management Plan

June 2022

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INTRODUCTION

An Air Tour Management Plan (ATMP) would provide the terms and conditions for commercial air tours conducted over Great Smoky Mountains National Park (Park) pursuant to the National Parks Air Tour Management Act (Act) of 2000. The Act requires that the Federal Aviation Administration (FAA) in cooperation with the National Park Service (NPS) (collectively, the agencies) establish an ATMP or voluntary agreement for each National Park System unit for which one or more applications to conduct commercial air tours has been submitted, unless that unit is exempt from this requirement because 50 or fewer commercial air tour operations are conducted over the Park on an annual basis, 49 U.S.C. § 40128(a)(5).

The objective of establishing an ATMP for the Park is to develop acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tours on natural and cultural resources, visitor experiences and tribal lands.

A notification of the public review period for the draft ATMP was announced in the Federal Register, and the draft ATMP was provided for public review and comment from September 3 through October 13, 2021. The comment period initially ended on October 3, 2021; however, the comment period was extended to October 13, 2021 due to an error discovered on the NPS Planning, Environment and Public Comment (PEPC) home page, which allowed the public additional time to review materials. In addition, the agencies held a virtual public meeting for the Park's draft ATMP on September 16, 2021. The draft ATMP was published on the NPS Planning, Environment, and Public Comment (PEPC) website (PEPC ID: 100689).

Any comments entered into PEPC by members of the general public, as well as any written comments mailed or emailed to the NPS, were considered and included in the overall project record. This *Public Comment Summary Report* provides a summary of the substantive comments submitted during the public comment period.

COMMENT ANALYSIS METHODOLOGY

Comment analysis is a process used to compile and correlate similar comments into a usable format for the agencies' decision-makers and the program team. Comment analysis assists the agencies in organizing, clarifying, and addressing information and aids in identifying the topics and issues to be evaluated and considered throughout the ATMP planning process.

The process includes five main components:

- developing a coding structure
- employing a comment database for comment management
- reviewing and coding of comments
- interpreting and analyzing the comments to identify issues and themes
- preparing a comment summary.

A coding structure was developed to help sort comments into logical groups by topic and issue. The coding structure was designed to capture the content of the comments rather than to restrict or exclude any ideas.

The NPS PEPC database was used to manage the public comments received. The database stores the full text of all correspondence and allows each comment to be coded by topic and category. All comments

were read and analyzed, including those of a technical nature, opinions, suggestions, and comments of a personal or philosophical nature.

Under each code, all comments were grouped by similar themes, and those groups were summarized with concern statements.

CONTENT ANALYSIS TABLES

In total, 488 correspondences were received providing 1,050 comments. The term “correspondence,” as used in this report, refers to each submission offered by a commenter. The term “comment,” as used in this report, refers to an individual issue and/or concern raised by a commenter that the agency coded by topic and category. A single commenter may have raised multiple comments within a correspondence. Similarly, multiple commenters raised many of the same comments. Of the correspondences received, one was identified as a form letter to which there were 75 signatories. The letter opposed the ATMP for impacts on the natural solitude of the Park and the lack of impact analysis to soundscapes, wildlife, wilderness and visitor experience. The letter also opposed the ATMP for lack of alternatives.

The following table was produced by the NPS PEPC database and provides information about the numbers and types of comments received, organized by code, including form letters.

Code	Description	Comments	Percentage
ADV100	Adverse Impacts: Soundscape impacts	201	19%
ADV200	Adverse Impacts: Wildlife/biological impacts	108	10%
ADV300	Adverse Impacts: Endangered species impacts	2	0.2%
ADV400	Adverse Impacts: Wilderness character impacts	28	2.7%
ADV500	Adverse Impacts: Cultural resource impacts	3	0.3%
ADV510	Adverse impacts: Visual impacts	12	1%
ADV520	Adverse Impacts: Equity	8	0.8%
ADV530	Adverse Impacts: Climate change/greenhouse gases/air quality	34	3.3%
ADV600	Adverse Impacts: Other	88	8%
ELE100	ATMP Elements: Annual number of air tours	25	2.4%
ELE200	ATMP Elements: Routes and altitudes	31	3%
ELE300	ATMP Elements: Aircraft type	4	0.4%
ELE400	ATMP Elements: Day/time	9	0.9%
ELE500	ATMP Elements: Other	48	5%
FAV100	Benefits of air tours	14	1.4%
NS100	Non-substantive comment: Support air tours	44	4%
NS150	Non-substantive comment: Other	48	5%
NS200	Non-substantive comment: Oppose air tours continuing	49	4.7%
NS300	Non-substantive comment: Oppose air tours introduction	192	18%
PRO100	Process Comments: Impact analysis	39	3.8%
PRO200	Process Comments: Public review	12	1%
PRO300	Process Comments: Alternatives considered	17	1.6%
PRO400	Process Comments: Other	10	0.9%
PRO500	Process Comments: NEPA	22	2%
TRIBE	Tribal concerns	2	0.2%

SUMMARY OF COMMENTS

The following text summarizes the comments received during the comment period and is organized by code. The summarized text is formatted into concern statements to identify the thematic issues or concerns represented by comments within the code. The focus on coding comments is on those comments with substantive content. Substantive comments raise, debate, or question a point of fact, or analysis of the impacts associated with the ATMP, or elements of the ATMP. Comments that merely support or oppose the ATMP are not considered substantive.

ADV100 Adverse Impacts: Soundscape Impacts

1. Commenters noted concern that air tours would impact soundscapes, destroying the peace, solitude, and quiet in national parks. These commenters requested the agencies prohibit commercial and other air flights over natural parks and their natural areas citing protection of the soundscape for both wildlife, tourists, and residents. One commenter referenced a 2017 news article at <https://www.science.org/doi/full/10.1126/science.aah4783>.
2. One commenter suggested the use of the Airbus H.130 Helicopter for air tours, as it is quieter than other aircraft types and would reduce sound pollution.
3. One commenter noted the World Health Organization's (WHO) definition of noise pollution as noise above 65 decibels (dB). The commenter also referenced data from the Helicopter Association International (HAI), stating the sound level of a helicopter flying at 500 feet (ft.) is approximately 87 dB and at 1,000 ft., the sound level drops to 79 dB.
4. Commenters provided numerous references to news and travel magazine articles that feature natural quiet, and also offered the following references related to soundscape but not linked to a specific comment:
 - a. Leverton, J. W., "Helicopter Noise: What is the Problem?," VERTIFLITE, Vol. 60, No. 2, March/April 2014, pp. 12-15
 - b. <https://www.nonoise.org/library/npreport/intro.htm>

ADV200 Adverse Impacts: Wildlife/Biological Impacts

1. Commenters expressed general concern that the noise from air tours would impact wildlife habitat and behavior, such as communication, mating, foraging, migration, hibernation and sleeping, for a variety of species including bats, birds, bears, deer, coyotes, bobcats, salamanders, insects, elk, and bald eagles. Commenters provided the following references: Bald Eagles, Grubb and Bowerman, 1997; and Peregrine Falcons, Van der Grift and de Molenaar, 2008.
2. Commenters requested various wildlife protection measures such as establishing greater limits on time of day and higher flight altitudes.
3. Commenters referenced the Organic Act of 1916 and noted air tourism would defy the Organic Act by disturbing wildlife.
4. One commenter expressed concern that emissions from air tours would increase the threat of acid rain, lower pH, and high dissolved oxygen levels that would result in impacts to trout and salamander habitat. One commenter referenced the NPS website for airborne sulfur and nitrogen pollution effects on plants and wildlife, Air Quality. National Park Service. 2019 Nov 7. <https://www.nps.gov/grsm/learn/nature/air-quality.htm>
5. Commenters referenced the following wildlife-related study without a specific comment:
 - a. A synthesis of two decades of research documenting the effects of noise on wildlife; Graeme Shannon et al; 26 June 2015. <https://onlinelibrary.wiley.com/doi/10.1111/brv.12207>

ADV300 Adverse Impacts: Endangered Species Impacts

1. One commenter noted that helicopter air tours, would disturb the Indiana bat migration within the Park.
2. One commenter noted the draft ATMP does not acknowledge compliance with the Endangered Species Act (ESA) should not be approved by the NPS until compliance is met.

ADV400 Adverse Impacts: Wilderness Character Impacts

1. Commenters expressed concern that air tours would affect wilderness characteristics and questioned compliance with the Wilderness Act. Commenters recommended that the Park be managed for natural quiet and wilderness values, and recommended that air tours be prohibited over wilderness. Commenters referenced various sources: Wilderness Act (U.S. C. 1131-1136, sec. 3c, 1964); FAA Order 1050.1F, p. 11-3, FAA Advisory Circular (AC) No. 91-36D. Section 6.a.; A Framework to Assess the Effects of Commercial Air Tour Noise on Wilderness (<https://doi.org/10.5849/jof.14-135>); Landres et al. 2008, p. 7- 8; Watson et al. 2015; Barber et al. 2010; NPS 2006; Marin et al. 2011; Miller 2008; Lynch et al. 2011; Mace et al. 2013; Rapoza et al. 2014.
2. One commenter stated that FAA Rule 14 CFR Part 93, which has determined that aircraft noise impacts are eliminated by mandating that aircraft not fly over urban communities, should be applied to designated wilderness areas. The commenter provided the following references: https://www.faa.gov/regulations_policies/rulemaking/media/NYNShoreHelicopterFinalRule.pdf; <https://www.planenoise.com/docs/12-1335-1446255.pdf>.
3. One commenter suggested that tours could still be offered outside the Parks boundaries and/or over 5,000 ft. above ground level (AGL) with views of the Park still possible while fully protecting the Park's designated wilderness areas.

ADV500 Adverse Impacts: Cultural Resource Impacts

1. One commenter noted that the draft ATMP does not acknowledge compliance with the National Historic Preservation Act (NHPA) and should not be signed by the NPS until it does.
2. Commenters requested the agencies ensure protection of cultural resources.

ADV510 Adverse Impacts: Visual Impacts

1. Commenters noted concern that air tours would cause visual disruption, ignoring the fundamental requirement of the Organic Act.

ADV520 Adverse Impacts: Equity

1. Commenters stated that air tours add to inequity by putting the interests of those who can afford the experience over the many who prefer the quiet, which means that a few wealthy individuals are creating unwanted visual impacts and unwelcomed noise. The commenters added that parks should be able to be equally enjoyed by all, regardless of income and that this is an environmental justice issue.

ADV530 Adverse Impacts: Climate Change, Greenhouse Gases, and Air Quality

1. Commenters noted that air tours adversely affect air quality and contribute to pollution and climate change, altering animal habitat and decreasing the overall Park experience.
2. One commenter referenced an NPS website article written in 2019 which states ozone levels are two times higher in the Park than in nearby cities.

ADV600 Adverse Impacts: Other

1. Commenters expressed concern that the presence of aircraft will further degrade an experience already diminished by overcrowding and historic levels of visitation, and Park staff will not be able to manage the additional maintenance, monitoring and enforcement of air tourism.
2. Commenters raised concern about the risk of aircraft failure and crash events which could endanger passengers and visitors and cause wildfires.
3. Several commenters noted the draft ATMP is discriminatory and deprives disabled individuals from experiencing air tours.

ELE100 ATMP Elements: Annual Number of Air Tours

1. One commenter noted that the maximum 309 annual commercial air tours appears to arise from a calculation of the three year average of total air tours reported in 2017, 2018 and 2019, not usage based on enactment of the Act, which is not consistent with the Act's legislative history, which provided that: "In determining the number of authorizations to issue to provide commercial air tour operations over a national park, the Administrator, in cooperation with the Director, shall take into consideration the provisions of the air tour management plan, the number of existing commercial air tour operators and current level of service and equipment provided by any such operators, and the financial viability of each commercial air tour operation." (106th Congress, H.R. 717, H.Rept. 106-273). The commenter stated that the authorized number of air tours should be no more than the lesser of actual usage in 2000 or the more recent three-year window average.
2. Commenters noted an overall aversion for the annual number of air tours and suggested they be reduced.
3. One comment noted that in Section 9.0 of the draft ATMP, third paragraph, there should be no ability to amend the ATMP to increase the total number of annual air tours.
4. One commenter noted that Section 6 of the draft ATMP, regarding New Entrants, seemed to leave the door open for additional flights above the annual cap stated in Section 3.1 of the draft ATMP if/when new entrants are involved. To address this concern, the commenter requested that Section 6 of the draft ATMP be clarified to say that, "While the allotment of annual flights may be redistributed from existing operator(s) to accommodate new entrants, the cap on the total number of annual flights will remain the same as stated in Section 3.1 of the plan."
5. Commenters suggested any future adjustments to annual limits be based on relevant data collected during the course of the ATMP, as well as an appropriate analysis of such data.
6. One commenter requested the depiction between annual number of flights versus daily number of flights. Another commenter stated there are no restriction on the number of flights per route to be authorized per year.
7. One commenter suggested that the annual number of flights be reduced by 10% per year resulting in 662 flights per year after three years and as the number of flights is reduced over three years, the allowable number of flights remaining each year should be re-distributed proportionally among the existing tour operators.
8. One commenter voiced concern over reducing the annual number of flights as it decreases the opportunity for visitors to see the Park from a different aspect.

ELE200 ATMP Elements: Routes and Altitudes

1. Many commenters opposed the routes and altitudes outlined in the draft ATMP. One commenter specifically opposed the black and blue routes as they place air tour traffic over the remote

portions of the Park, disregarding the Wilderness value. Another commenter noted the approved routes for helicopters would allow for flights within the 89% of the Park designated as Wilderness.

2. One commenter stated the Orange and Purple routes will have minimal impact to wildlife and will not significantly disturb Park visitors.
3. Commenters suggested routes remain ½ to 1-mile outside of the Park boundary, a minimum of 2,600, 5,000 or 10,000 ft. AGL. Commenters also requested a prohibition on hovering and circling within the Park be included in the draft ATMP.
4. One commenter referenced that in Section 2.0 of the draft ATMP, with respect to the phrase "or necessary for safe operation of an aircraft as determined under the rules and regulations of the FAA requiring the pilot-in-command to take action to ensure the safe operation of the aircraft," that the FAA has used similar language elsewhere to allow for aircraft operation at less than 5,000 ft. (or other purported minimum altitude requirement) above actual ground level, under visual flight rules or otherwise, (1) where cloud cover is lower than the otherwise minimum altitude, or (2) where terrain is uneven as in ridges and valleys and the aircraft is flying over the higher terrain. The commenter stated that these exceptions deplete the rule and allow flight operations to occur at less than the stated minimum altitude with resultant significantly amplified ground disturbances. The commenter stated that this and all other minimum altitude requirements should eliminate the exception and to replace it with requirements that (a) flights will operate at all times at the stated minimum altitude over any part of the terrain, and (b) flights will not operate or, if in operation, will discontinue operations where cloud cover or other conditions are expected to require them to deviate below the stated altitude.
5. Regarding Section 3.2 of the draft ATMP, first sentence (authorized route), one commenter questioned the basis for this specific route, asking if the purpose is to maximize the scenic opportunities of the commercial air passengers and profit of the operator, or if it is to minimize actual ground disruptions to the natural habitat and visitor experience. The commenter stated that it should be the latter, and if not, then the approved route should be modified to that effect.
6. One commenter suggested if operators comply with the quiet technologies incentives of Section 3.8 of the draft ATMP then those operators should be exempt from the 2,600 ft. AGL requirements.
7. One commenter stated that the justification for the 2,900 ft. AGL in Section 4.0 of the draft ATMP is not sufficient. The commenter noted that the measure against the actual physical injury threshold for animal life does not account for disruption of natural habitat and does not address the disruption to the visitor experience. The commenter also noted that the noise from helicopters/rotary aircraft which are the bulk of commercial air tour operations are far louder and far more disruptive than fixed wing aircraft, both in general cruise mode and especially in altitude adjustment mode, and are more impactful at any altitude, approaching if not exceeding the cited 92 dB injury level.

ELE300 ATMP Elements: Aircraft Type

1. Regarding Section 3.3 of the draft ATMP, commenters noted that noise-reducing technology currently exists in next generation commercial air tour aircraft, and that any authorized new or replacement aircraft should be required to utilize the maximum noise-reducing technology and models, beyond not exceeding the prior noise levels, and this should be an express requirement for agency concurrence. One commenter voiced concern that noise-reducing technology would not reduce that noise levels within the Park since this is an incentivized component of the ATMP, not a required element.

2. Regarding Section 3.8 of the draft ATMP regarding Quiet Technology (QT) Incentives, one commenter asked clarifying questions such as whether converting to quiet technology aircraft only applies to new aircraft employed by the operator, how much quieter will the aircraft have to be, and since an improvement of only a few decibels would be indistinguishable to wildlife and visitors, has the required improvement been quantified?

ELE400 ATMP Elements: Day/Time

1. Commenters suggested hours of operation be shortened to midday or 3 hours after sunrise and 3 hours before sunset, providing protection for wildlife and the solitude of hikers.
2. One commenter stated that in Section 3.4 of the draft ATMP, the allowable hours of operation during the day do not adequately minimize disruption to the natural habitat and visitor experience, and that there should be a narrower window of no more than two hours, 11am to 1pm, to constrain the actual time of operation. The commenter added that any such limitation should not be linked purely to sunrise and sunset, which vary greatly by park and season, but should be stated as more restrictive, as in “may operate from the later of four hours after sunrise or 11am to the earlier of four hours before sunset or 1pm.” Another commenter suggested air tours operate one hour after sunrise until one hour before sunset, as defined by the National Oceanic and Atmospheric Administration (NOAA) and NPS can establish temporary no-fly periods that apply to air tours for special events or planned Park management.
3. One commenter recommended limiting flights allowed during high volume weekends, such as holidays, for safety reasons. Another commenter suggested flights are restricted on certain days of the week.
4. One commenter suggested the sunrise/sunset restrictions be waived for quiet technology aircraft as Park policy mandates to always seek ways to avoid, or to minimize to the greatest degree practicable, adverse impacts on park resources and values.

ELE500 ATMP Elements: Other

1. One commenter stated the draft ATMP does not provide ample information on how the proposed plan will protect the Park resources and visitor experiences.
2. Commenters stated the draft ATMP should include a sunset date for eliminating the remaining air tours.
3. One commenter suggested the adaptation of quiet technology be mandatory.
4. Commenters voiced concern that there is no means to monitor the flights for compliance and enforcement. One commenter stated there are no penalties for violating requirements in the ATMP. Another commenter noted there are unreported operators flying near the Park and NPS cannot determine if their flights have occurred within the Park boundaries.
5. Regarding Section 3.6 of the draft ATMP, one commenter stated that the required reporting should be fully accessible to the public and that there is no proprietary claim by any operator to information on operations.
6. Regarding Section 3.7A of the draft ATMP, one commenter suggested air tour pilots will attend at least one training course per year conducted by NPS staff. Other commenters noted the benefits of NPS required operator training. Another commenter suggested NPS require air tour operators to provide air tour passengers with an educational brochure or rack card that informs the public when they are flying over sensitive areas, cultural sites, and restricted areas.
7. Regarding Section 3.7B of the draft ATMP, one commenter stated that the meeting should be fully open to the public for participation.

8. Regarding Section 3.8 of the draft ATMP, one commenter stated there should be no enhanced operation incentive for quieter aircraft, as they will still have a negative impact during hours of operation. The commenter stated that the quiet technology incentive should instead apply solely to the ability to replace aircraft. The commenter noted there is no definition provided for quiet technology aircraft, and therefore, a definition should be added that quantifies specifically the maximum noise standards that qualify as such, and the standard should be a significant reduction of at least 50% to qualify for ability to replace. The commenter referenced the following: https://www.faa.gov/documentLibrary/media/Advisory_Circular/AC-93-2.pdf. Another commenter suggested the use of not-to-exceed thresholds in the ATMP under certain conditions while another commenter stated quiet technologies are not an adequate substitute for management actions to reduce air tours. One commenter noted helicopters do not meet the quietest available technology and therefore should be disallowed or phased out over time.
9. Regarding Section 4.0 of the draft ATMP, one commenter suggested the alternative that specific operators may continue to conduct the number of air tour operations authorized under Interim Operating Authority (IOA) as reflected in their existing Operations Specifications (OpSpecs) until such OpSpecs are modified to require compliance. In addition, the commenter stated the agencies should be responsible for the compliance of all air tours.
10. In regards to Section 4.1 of the draft ATMP, one commenter suggested operators should be required to equip all aircraft used for air tours with flight monitoring technology and to report flight monitoring data as part of their quarterly reports.
11. Regarding Section 5.0 of the draft ATMP, first sentence, one commenter stated there should be a date by which the operator must modify the OpSpecs to comply with the ATMP or cease any operations, and that deadline should be a matter of a few months. Another commenter suggested the draft ATMP can be amended, upon approval of the NPS and FAA, at any time for specific operators.
12. Regarding Section 5.1 of the draft ATMP, one commenter stated that all aircraft should be required to install Automatic Dependent Surveillance-Broadcast Out (ADS-B OUT) technology and to operate from the beginning to the end of any flight under the ATMP in full transmit mode. The commenter requested the draft ATMP require that all such operations be public and subject to public review in real time by specific identification of the aircraft, operator, time, altitude and location. The commenter stated there is no expectation of privacy by any operator in such operations.
13. Regarding Sections 6.0 and 7.0 of the draft ATMP, one commenter stated there is no provision setting forth requirements for any operator sale of its business or transfer of its temporary license to overfly the Park under the draft ATMP. In addition, the commenter stated that reasonable operator licensing, certification, insurance, and bond requirements should be included as a condition of authorized operations under the ATMP to ensure maximum safety and compliance. Regarding Section 6.0 of the draft ATMP, one commenter suggested agencies not consider applications from new entrant operators and not authorize commercial air tours by a successor in interest to any of the operators identified.
14. One commenter noted data is based on numbers reported from 2017-2019, however the operators are reporting record numbers for 2020 and anticipate increased customer demand.
15. One commenter requested NPS provide 90-day notice to the operators for the NPS enforced no-fly periods while another requested 1-month notice.
16. One commenter suggested rather than limiting the number and timing flights over the Park, the NPS work together with operators and leverage the resource to benefit them. The commenter

also suggested the two entities can collaborate to determine the best altitude that reduces the disturbance of nature yet still allows for air tours.

17. Commenters noted that the adaptive management section of the draft ATMP is vague and asked if there would be a pre-defined and systematic adaptive management program with indicators, desired future conditions, periodic review time frames, or other metrics that would trigger an NPS review to determine if changes are needed to the ATMP, as is commonly done with many adaptive management programs, and if so, what are those indicators or metrics. Other commenters had recommendations for adaptive management including: 1) that it not be authorized in the event it would increase the number of air tours, decrease minimum altitude or other mitigation requirements, or otherwise increase noise emission or other negative impacts on the natural habitat and visitor experience; 2) that any proposed modifications under adaptive management be fully noticed to the public for advance comment; 3) that adaptive management be adequately described in an appropriate level National Environmental Policy Act (NEPA) document; 4) that NPS have volunteers monitor aircraft flight patterns and noise, and that implementation of this draft ATMP should include an adaptive management process with operators, agency staff, scientists, and citizens; and 5) the agencies should monitor new technology that may further reduce the noise from aircraft and its ability to meet Park needs, and as a part of adaptive management, NPS should require the most current noise reducing equipment and practices for permitting use by a specific type of aircraft.
18. One commenter referenced the following IOA Elimination related articles without a specific comment:
 - a. https://www.nps.gov/subjects/sound/upload/NRSS_NRR_2019_Air_Tour_Report_20200824.pdf
 - b. https://www.nps.gov/orgs/1981/upload/Interagency-2020-Vision_508.pdf

FAV100 Benefits of Air Tours

1. Several commenters noted the enjoyment and educational benefits of air tours while other commenters noted they realize that some people, elderly or disabled, cannot hike and would benefit from air tours.
2. Several commenters noted air tourism generates money for the local economy.
3. One commenter noted that helicopter tours produce less noise than vehicle traffic in the Park. Another commenter added air tours do not produce litter or other impacts at the Park.

PRO100 Process Comments: Impact Analysis

1. Several commenters noted the baseline for the allowed annual number of flights is based on previously permitted IOA flights, rather than providing analysis or additional data of the effects on the Park. Another commenter noted IOA does not provide any operating conditions (e.g., routes, altitudes, time of day, etc.) for air tours other than an annual limit and therefore air tours under the IOA have not been properly managed.
2. Several commenters noted the overall lack of impact analysis required by NEPA in the draft ATMP. One commenter asked if a visitor poll was conducted at the Park, similar to the poll conducted early in the ATMP process for Hawai'i Volcanoes National Park. The commenter asked if a poll was conducted, what were the results, or if not, why was a poll not conducted. Other commenters suggested the use of the Natural Sounds division or sound equipment for auditory measurements of helicopter noise compared to natural park noise.
 - a. One commenter stated the noise reduction target should be in tiers of impact as described in the reference McKenna et al, 2016. This commenter also suggested the Natural

Sounds Program use the Attenuation Calculator and dose-response models to develop an action alternative composed of a combination of operating conditions designed to achieve the Park's noise reduction targets.

3. One commenter stated that 40 CFR 1508.8 requires government programs to address indirect effects, and although the draft ATMP only extends to a half-mile around the Park, the indirect effects stretch all the way back to the airport. The commenter asked how the draft ATMP considers the damage to the homes and businesses affected by air tours.
4. One commenter noted the draft ATMP does not disclose potential impacts of the proposed action prior to public comment of the action.
5. One commenter stated NPS has never considered whether air tours are an appropriate use of the Park and should be prohibited based on Section 40128(b)(3)(A) of the Act.
6. One commenter noted the NEPA review for the ATMP should include an appropriate use analysis, as described in NPS Management Policies 2006, Sections 1.5 and 8.1.2.
7. One commenter noted the NPS did not provide adequate information to evaluate the potential impacts of the proposed action or alternatives to validate the reduction of impacts.

PRO200 Process comments: Public Review

1. Commenters noted NPS responsibility under NEPA to conduct public scoping and to solicit public input on environmental issues. The commenter noted the NPS should consider potential alternatives and sources of data as part of scoping, as described in Section 4.2 of the NPS NEPA Handbook in any of the documents associated with the release of the proposed ATMP.
2. One commenter stated the decision document is not available for public review as described in the court decision that ATMPs go through notice and comment and comply with NEPA https://www.peer.org/wp-content/uploads/2020/05/5_1_20-Court-Decision-Overflights.pdf.
3. One commenter suggested posting information in the Park's visitor center to solicit public input in addition to the online notice and previously held public meeting.
4. One commenter voiced concern that the NPS posted misleading information regarding the Park's commitment to phase out air tourism, resulting in the lack of public feedback.

PRO300 Process Comments: Alternatives Considered

1. Commenters expressed concern that the initial four ATMPs available for public comment are simplistic documents with no scientific data or analysis to justify the proposed actions and no consideration of alternatives other than to institutionalize the status quo level of air tours at the respective parks.
2. Several commenters noted that even though the legislation provides that a total ban on air tours is permissible, this alternative was never proposed in the ATMPs.
3. One commenter suggested the use of the NPS Natural Sounds Program Attenuation Calculator and visitor studies to propose a new action alternative of a modeled approach to reducing air tourism noise over the Park.
4. One commenter suggested NPS consider a new action alternative related to Section 3.2 of the draft ATMP in order to decrease air tour noise over developed areas as well as wilderness areas within the Park. This commenter also suggested NPS consider a new action alternative related to Section 3.1 and Section 4 of the draft ATMP to systematically reduce air tours over a 3-to-5-year period allowed at medium-to-high volume air tour parks.

PRO400 Process Comments: Other

1. Several commenters voiced concern that the planning and compliance process is being managed by the Natural Sounds staff rather than the Park's environmental and cultural compliance staff and suggest the planning efforts be passed to the Environmental Quality Division (EQD). The commenter also expressed concerned NPS staff lacks the knowledge and ability to manage the process in accordance with NEPA and other compliance requirements including NHPA, ESA, etc.
2. One commenter suggested NPS update the General Management Plan (GMP) required in 54 USC 100507 to consider the Park carrying capacity (as required by the Recreation Act of 1978) to further protect Park resources and wildlife.
3. One commenter stated that one of the primary findings from the Government Accountability Office (GAO) was that the FAA and the Park Service lack a mechanism to verify the number of air tours conducted over national park units, both historically and under interim operating authority. The commenter asked why the GAO's recommendation that a sturdy monitoring program be implemented as an integral part of any ATMP was ignored in this proposal.
4. One commenter voiced concern that the agencies unconventional approach to the ATMP public scoping process and absences of alternatives is unacceptable and will result in further legal challenge through the NEPA process. This commenter also noted it is likely that many of the public comments submitted on the draft ATMP will focus on the major procedural flaws rather on the substantive details.

PRO500 Process Comments: NEPA

1. Commenters noted the draft ATMP does not comply with NEPA as the agencies used a categorical exclusion (CE) and did not conduct full NEPA analysis through the preparation of an environmental assessment (EA) or an environmental impact statement (EIS). Commenters referenced the NPS NEPA Handbook, NPS CE 3.3 stating CEs are only allowed when the proposed action causes minimal environmental impacts and the draft ATMP does not justify minimal impacts.
2. One commenter voiced concern that the misuse of a categorical exclusion is aimed to avoid meaningful decision-making and public engagement.

TRIBE: Tribal Concerns

1. Commenters stated that there is no evidence of consultation with potentially affected Native American tribes as required under the NHPA.

NS100 Non-Substantive Comment: Support Air Tours

1. For many commenters, aircraft tours add to the excitement and enjoyment of the national park experience.
2. Commenters expressed that air tours provide a valued service to the public and disabled individuals.
3. Commenters noted that they have not noticed air tours or heard visitor complaints about air tourism over the Park.
4. Commenters noted the significantly fewer impacts to the Park through air tours versus the true impairments caused by the majority of visitors on the ground. One commenter noted the vehicle traffic counts in the Park reached 10,544,367 in the year 2020 as opposed to the small percentage of visitors using air tourism to visit the Park.

5. One commenter noted air tourism supports the owners and pilots of small local businesses, noting this is specifically important due to the pandemic. Another commenter noted the increase in tax revenue for the county provided through air tours.
6. Several commenters supported the draft ATMP as it establishes clear guidance for Park management of air tours.

NS150 Non-Substantive Comment: Other

1. Commenters, in general, expressed support for the draft ATMP as written, for restricting commercial flights, for restricting low-flying air travel, enforcing restrictions on noise, limiting air tours, and the protection of Park resources from the noise and intrusion of commercial air tours.
2. One commenter requested that all existing exemptions to the ATMP requirement should be withdrawn by the National Park Service Director, and that no further voluntary agreements should be adopted which have the effect of providing fewer restrictions on commercial air tour overflights than an otherwise-applicable ATMP.
3. Many commenters requested no increase in the number of air tours allowed, but rather a decrease.
4. One commenter stated the draft ATMP does not include acceptable or effective methods to mitigate or prevent the significant impacts of commercial air tours on this Park.
5. Several commenters noted the air tours within the Park benefits only the financial gain of operators and the NPS with a cost to the Park's environment. One commenter inquired why operators are allowed to enter the Park without paying entrance fees and many suggested operators pay an entrance fee.
6. Several commenters noted the airspace above the Park should be designated for search and rescue or research purposes only.

NS200 Non-Substantive Comment: Oppose Air Tours Continuing

1. Commenters expressed their general opposition to air tours continuing to occur at the Park and cited to concerns about additional traffic, pressure on Park resources, wildlife impacts, cultural resource impacts, wilderness impacts, air pollutants, and impacts to visitor experience.

NS300 Non-Substantive Comment: Oppose Air Tours Introduction

1. Commenters expressed their opposition to air tours being introduced at the Park, citing concerns about increased visitor impacts, wilderness, wildlife impacts, soundscapes, and visitor experience. One commenter stated that air tours over our national parks and other sensitive lands offer no appreciable competing public benefit and in fact are inherently contradictory, and that national parks were never intended for profit extraction at the expense of preservation of the natural habitat and visitor experience.
2. Several commenters voiced opposition to the ATMP for a lack of meaningful data or supporting analysis and the absence of alternatives and requested no air tours within the Park.
3. Several commenters requested no air tours over Cade's Cove or Clingman's Dome, specifically.
4. One commenter stated that if drones are not allowed because of noise pollution and decreased visitor enjoyment, neither should air tours.
5. One commenter noted drones are not allowed in the Park and therefore other aircraft types should not be allowed either. The commenter referenced the following YouTube video:
<https://youtu.be/1dcFtbrcr7w>